

ATTACHMENT NO. 3

ASSISTANCE AGREEMENT

1. Award No. DE-OE0000221		2. Modification No. 001	3. Effective Date 09/30/2010	4. CFDA No. 81.122
5. Awarded To KANSAS CITY POWER & LIGHT COMPANY Attn: RANDY VANCE PO BOX 418679 KANSAS CITY MO 641419679		6. Sponsoring Office U.S. DOE/NETL Morgantown Campus 3610 Collins Ferry Road PO Box 880 Morgantown WV 26507-0880		7. Period of Performance 02/01/2010 through 01/31/2015
8. Type of Agreement <input type="checkbox"/> Grant <input checked="" type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Other	9. Authority 31 USC 6304 - see also Page 2 10 USC 2358		10. Purchase Request or Funding Document No. 100E000538	
11. Remittance Address KANSAS CITY POWER & LIGHT COMPANY Attn: RANDY VANCE PO BOX 418679 KANSAS CITY MO 641419679		12. Total Amount Govt. Share: \$23,940,112.00 Cost Share : \$29,975,843.00 Total : \$53,915,955.00		13. Funds Obligated This action: \$0.00 Total : \$23,940,112.00
14. Principal Investigator Edward Hedges 816-556-2389		15. Program Manager Darshan L. Goswami Phone: 412-386-7268		16. Administrator U.S. DOE/NETL Morgantown Campus 3610 Collins Ferry Road PO Box 880 Morgantown WV 26507-0880
17. Submit Payment Requests To OR for NETL (Morgantown) U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 4787 Oak Ridge TN 37831		18. Paying Office OR for NETL (Morgantown) U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 4787 Oak Ridge TN 37831		19. Submit Reports To See Reporting Requirements
20. Accounting and Appropriation Data See Schedule				
21. Research Title and/or Description of Project RECOVERY ACT - KANSAS CITY POWER & LIGHT GREEN IMPACT ZONE SMARTGRID DEMONSTRATION				
For the Recipient		For the United States of America		
22. Signature of Person Authorized to Sign		25. Signature of Grants/Agreements Officer		
23. Name and Title		24. Date Signed		26. Name of Officer DARLENE D. RIGGI
				27. Date Signed

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CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

DE-OE0000221/001

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NAME OF OFFEROR OR CONTRACTOR

KANSAS CITY POWER & LIGHT COMPANY

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DUNS Number: 006965842 DOE Award Administrator: Sue Miltenberger 304-285-4083 susan.miltenberger@netl.doe.gov Recipient Business Officer: Edward Hedges 816-556-2389 ed.hedges@kcpl.com Block 9 Authority: PL 95-91 DOE Organization Act, PL 111-5 American Recovery and Reinvestment Act of 2009 PL 109-58 Energy Policy Act 2005 and PL 110-140 Energy Independence and Security Act of 2007 ***See attached pages for full text of this Amendment*** ASAP: NO Extent Competed: COMPETED Davis-Bacon Act: YES				

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JULY 2004

The purpose of this Amendment is to reflect the revised estimated costs for Cooperative Agreement DE-OE0000221. As a result, the Special Terms and Conditions and Attachments 1 through 4 are revised and Attachment 5 is incorporated. Accordingly, the following changes are hereby made:

1. The SPECIAL TERMS AND CONDITIONS FOR USE IN MOST GRANTS AND COOPERATIVE AGREEMENTS are deleted in its entirety and replaced with the attached SPECIAL TERMS AND CONDITIONS FOR USE IN MOST GRANTS AND COOPERATIVE AGREEMENTS – AMENDMENT 001. The Special Terms and Conditions are revised to reflect changes resulting from the definitization of the project costs and scope. As a result, the Recipient is now authorized to invoice for all XXXXXX.
2. Attachment 1 – Intellectual Property Provisions is deleted in its entirety and replaced with the attached Attachment 1 – Intellectual Property Provisions – Amendment 001. The Intellectual Property Provisions are revised to reflect the inclusion of the Rights in Data – General Provision and the Patent Rights Waiver Provision.
3. Attachment 2 – Statement of Project Objectives is deleted in its entirety and replaced with the attached Attachment 2 – Statement of Project Objectives – Amendment 001 and the attached Attachment 2 (Appendix 1 – Instructions for Preparation of Deliverables). The Statement of Project Objectives is revised to reflect the negotiated project scope and the Instructions for the Preparation of Deliverables.
4. Attachment 3 – Federal Assistance Reporting Checklist is deleted in its entirety and replaced with the attached Attachment 3 – Federal Assistance Reporting Checklist – Amendment 001. The Federal Assistance Reporting Checklist is revised to reflect the revised reporting requirements.
5. Attachment 4 – Budget Page is deleted in its entirety and replaced with the attached Attachment 4 – Budget Page – Amendment 001. The Budget Page is revised to reflect the definitized project costs.
6. Attachment 5 – Wage Determinations is incorporated to reflect the applicable Wage Determinations for the place of performance.

Except as contained herein, all other terms and conditions remain in full force and effect.

END OF AMENDMENT 001

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SPECIAL TERMS AND CONDITIONS FOR USE IN MOST GRANTS AND COOPERATIVE AGREEMENTS – AMENDMENT 001**RESOLUTION OF CONFLICTING CONDITIONS**

Any apparent inconsistency between Federal statutes and regulations and the terms and conditions contained in this award must be referred to the DOE Award Administrator for guidance.

AWARD AGREEMENT TERMS AND CONDITIONS

This award/agreement consists of the Grant and Cooperative Agreement cover page, plus the following:

- a. Special terms and conditions.
- b. Attachments:

Attachment No.	Title
1	Intellectual Property Provisions
2	Statement of Project Objectives
3	Federal Assistance Reporting Checklist
4	Budget Pages
5	Wage Determinations
- c. Applicable program regulations (none)
- d. DOE Assistance Regulations, 10 CFR Part 600 at <http://ecfr.gpoaccess.gov> and if the award is for research and to a university or non-profit, the Research Terms & Conditions and the DOE Agency Specific Requirements at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp>.
- e. Application/proposal dated August 26, 2009 and revision dated July 8, 2010.
- f. National Policy Assurances to Be Incorporated as Award Terms in effect on date of award at http://management.energy.gov/business_doe/1374.htm.

CONDITIONS ON AWARD

- a. Accounting System Review

~~In order to definitize this award, DOE must be able to verify that the Recipient's accounting system complies with applicable Federal regulations. To assist DOE in making this determination, DOE reserves the right to initiate a review of the Recipient's accounting system to ensure its compliance with those regulations. Should the review identify deficiencies in the accounting system, or determine the accounting system to be inadequate, the Recipient shall have thirty (30) days from the issuance of the review to correct any such deficiencies.~~

~~If any issues identified in the review remain unresolved at the end of the 30-day period, or if the Recipient's financial management systems are determined not to conform to the appropriate requirements, DOE shall suspend payment under the award until all issues are resolved. If all issues are not resolved to the satisfaction of the DOE Contracting Officer, within 45 days of the date of payment suspension, the Recipient agrees that DOE may declare the award terminated by mutual agreement of the parties upon written notice to the Recipient.~~

- b. Estimated Cost of Award and Verification of Recipient Cost sharing

~~The estimated cost of the award is based on the Recipient's application dated August 26, 2009. The estimated cost is subject to definitization within one hundred twenty (120) days of the award date. DOE and Recipient agree that the estimate may be adjusted based on the results of the accounting system review and other matters affecting the estimate that are identified during the definitization period. If the parties cannot mutually agree to a final estimated project cost, and/or Recipient fails to provide adequate evidence~~

~~of financial commitments for the full private sector share of the project cost, either party may declare the award terminated by mutual agreement of the parties upon written notice to the other party.~~

e. ~~Statement of Project Objectives~~

~~The Statement of Project Objectives (SOP) contained in Recipient's application is incorporated into this award as the project SOP. DOE and the Recipient agree that the SOP may be refined during the 120-day definitization period. Pending definitization, the Recipient is only authorized to perform the Phase I tasks identified in Attachment 2. If the parties cannot mutually agree to a revised SOP, either party may declare the award terminated by mutual agreement of the parties upon written notice to the other party.~~

d. ~~Intellectual Property~~

~~Within one hundred twenty (120) days after the date of award of this Cooperative Agreement, the Parties must agree on the following:~~

- ~~• a listing of the minimum technical data to be provided to the Government with unlimited rights, to be inserted into Article 03, 10 CFR 600.325 Appendix A, Rights in Data Programs Covered Under Special Data Statutes (OCT 2003), of Attachment 1 to this award, Intellectual Property Provisions.~~
- ~~• a listing of data the Recipient would like to protect under EPAet to be inserted into Article 06, Protected Data, of Attachment 1 to this award, Intellectual Property Provisions.~~

~~If the Parties cannot reach agreement on any of these listings within 120 days after award, the Government reserves the right to insert the words, "All data generated under this award" in Article 03, and the word "None" in Article 06, as appropriate.~~

e. Payment of Costs/Deobligation of funds

DOE has obligated \$23,940,112 for completion of the project authorized by this award. However, only \$957,604 (4% of the estimated DOE share of the project) is available for work performed by the Recipient during the definitization period of the project. In the event the award is not definitized within 120 days of the award date, and either party elects to declare the award terminated, the maximum DOE liability to the Recipient is DOE's share of incurred costs up to \$957,604 provided such costs are reasonable, allocable to the award, and allowable under the terms of the award and the applicable Federal Cost Principles. The Recipient may incur costs beyond this limit at its own risk, subject to later reimbursement by DOE in the event the project proceeds beyond the definitization period. DOE reserves the right to unilaterally deobligate the balance of funds obligated, but not authorized for expenditure, in the event the Conditions on Award and NEPA requirements are not satisfied and the project is terminated.

PAYMENT PROCEDURES - REIMBURSEMENT THROUGH THE AUTOMATED CLEARING HOUSE (ACH) VENDER INQUIRY PAYMENT ELECTRONIC REPORTING SYSTEM (VIPERS)

- a. Method of Payment. Payment will be made by reimbursement through ACH.
- b. Requesting Reimbursement. Requests for reimbursements must be made electronically through Department of Energy's Oak Ridge Financial Service Center (ORFSC) VIPERS. To access and use VIPERS, you must enroll at <https://finweb.oro.doe.gov/vipers.htm>. Detailed instructions on how to enroll are provided on the web site.

For non-construction awards, you must submit a Standard Form (SF) 270, "Request for Advance or

Reimbursement" at <https://finweb.oro.doe.gov/vipers.htm> and attach a file containing appropriate supporting documentation. The file attachment must show the total federal share claimed on the SF 270, the non-federal share claimed for the billing period if cost sharing is required, and cumulative expenditures to date (both Federal and non-Federal) for each of the following categories: salaries/wages and fringe benefits; equipment; travel; participant/training support costs, if any; other direct costs, including subawards/contracts; and indirect costs. For construction awards, you must submit a SF 271, "Outlay Report and Request for Reimbursement for Construction Programs," through VIPERS.

c. Timing of submittals. Submittal of the SF 270 or SF 271 should coincide with your normal billing pattern, but not more frequently than every two weeks. Requests for reimbursement must be limited to the amount of disbursements made during the billing period for the federal share of direct project costs and the proportionate share of any allowable indirect costs incurred during that billing period.

d. Adjusting payment requests for available cash. You must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from DOE/NNSA.

e. Payments. The DOE approving official will approve the invoice as soon as practicable but not later than 30 days after your request is received, unless the billing is improper. Upon receipt of an invoice payment authorization from the DOE approving official, the ORFSC will disburse payment to you. You may check the status of your payments at the VIPER web site. All payments are made by electronic funds transfer to the bank account identified on the ACH Vendor/Miscellaneous Payment Enrollment Form (SF 3881) that you filed.

COST SHARING

a. Total Estimated Project Cost is the sum of the Government share and Recipient share of the estimated project costs. The Recipient's cost share must come from non-Federal sources unless otherwise allowed by law. By accepting federal funds under this award, you agree that you are liable for your percentage share of total allowable project costs, on a budget period basis, even if the project is terminated early or is not funded to its completion. This cost is shared as follows:

Budget Period No.	Budget Period Start	Government Share \$/%	Recipient Share \$/%	Total Estimated Cost
1	02/01/2010	*\$23,940,112/44%	*\$25,890,168/56%	*\$49,830,280
Total Project		*\$23,940,112/44%	*\$25,890,168/56%	*\$49,830,280

**These costs reflect estimated costs only and are subject to negotiation.*

b. If you discover that you may be unable to provide cost sharing of at least the amount identified in paragraph a of this article, you should immediately provide written notification to the DOE Award Administrator indicating whether you will continue or phase out the project. If you plan to continue the project, the notification must describe how replacement cost sharing will be secured.

c. You must maintain records of all project costs that you claim as cost sharing, including in-kind costs, as well as records of costs to be paid by DOE/NNSA. Such records are subject to audit.

d. Failure to provide the cost sharing required by this Article may result in the subsequent recovery by DOE/NNSA of some or all the funds provided under the award.

REBUDGETING AND RECOVERY OF INDIRECT COSTS - REIMBURSABLE INDIRECT COSTS AND FRINGE BENEFITS

- a. If actual allowable indirect costs are less than those budgeted and funded under the award, you may use the difference to pay additional allowable direct costs during the project period. If at the completion of the award the Government's share of total allowable costs (i.e., direct and indirect), is less than the total costs reimbursed, you must refund the difference.
- b. Recipients are expected to manage their indirect costs. DOE will not amend an award solely to provide additional funds for changes in indirect cost rates. DOE recognizes that the inability to obtain full reimbursement for indirect costs means the recipient must absorb the underrecovery. Such underrecovery may be allocated as part of the organization's required cost sharing.

PRE-AWARD COSTS

You are entitled to reimbursement for costs incurred on or after 11/06/2009 if such costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600 and the terms of this award (including the NEPA Requirements provision).

USE OF PROGRAM INCOME - COST SHARING

If you earn program income during the project period as a result of this award, you may use the program income to meet your cost sharing requirement.

STATEMENT OF FEDERAL STEWARDSHIP

DOE/NNSA will exercise normal Federal stewardship in overseeing the project activities performed under this award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies which develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the award objectives have been accomplished.

STATEMENT OF SUBSTANTIAL INVOLVEMENT

RECIPIENT'S RESPONSIBILITIES. The Recipient is responsible for:

- Performing the activities supported by this award in accordance with the Project Management Plan, including providing the required personnel, facilities, equipment, supplies and services;
- Managing and controlling project activities, including coordinating any Federally Funded Research and Development Center (FFRDC) activities that are performed in the project, in accordance with established processes and procedures to ensure tasks and subtasks are completed within schedule and budget constraints defined by the current Project Management Plan.
- Implementing an approach to identify, analyze, and respond to project risks that is commensurate with the complexity of the project.
- Defining and revising approaches and plans, submitting the plans to the DOE for review, and incorporating DOE comments;
- Coordinating related project activities with external suppliers, including DOE M&O contractors, to ensure effective integration of all work elements;
- Attending semiannual program review meetings and reporting project status;

- Submitting technical reports and incorporating DOE comments; and,
- Presenting the project results at appropriate technical conferences or meetings as directed by the DOE Project Officer (number of conferences/meetings will not exceed five).

DOE RESPONSIBILITIES. DOE is responsible for:

- Reviewing in a timely manner project plans, including project management, testing and technology transfer plans, and recommending alternate approaches, if the plans do not address critical programmatic issues;
- Participating in project management planning activities, including risk analysis, to ensure DOE's program requirements or limitations are considered in performance of the work elements.
- Conducting semiannual program review meetings to ensure adequate progress and that the work accomplishes the program and project objectives. Recommending alternate approaches or shifting work emphasis, if needed;
- Integrating and redirecting the work effort to ensure that project results address critical system and programmatic goals established by the DOE OE, in coordination with the DOE Renewables and Distributed Systems Integration Program;
- Promoting and facilitating technology transfer activities, including disseminating program results through presentations and publications;
- Serving as scientific/technical liaison between awardees and other program or industry staff;
- Working to identify and provide guidance on any issues related to availability of available Smart Grid technologies/supplies; and
- Providing the Recipient with guidance on any cyber-security requirements that are necessary.

The DOE intends to utilize resources at the National Energy Technology Laboratory (NETL) to assist in determining the appropriate data to be gathered and to provide an overall programmatically consistent approach for technical, economic, and benefit analysis based on the gathered data. In support of this effort, the Project Officer will be significantly involved to:

- Assist demonstration project team in establishing project goals, metrics, and data requirements;
- Determine specific data to be collected, frequency of collection, & method of collection;
- Determine approach to use raw data;
- Determine baseline costs and performance prior to introduction of Smart Grid technologies and systems;
- Determine demonstration costs and performance; and
- Compare cost and performance of demonstration circuit(s) before and after introduction of Smart Grid technologies and systems.

SITE VISITS

DOE/NNSA's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. You must provide, and must require your subawardees to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

REPORTING REQUIREMENTS

- a. **Requirements.** The reporting requirements for this award are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to this award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.
- b. **Dissemination of scientific/technical reports.** Scientific/technical reports submitted under this award will be disseminated on the Internet via the DOE Information Bridge (www.osti.gov/bridge), unless the report contains patentable material, protected data, or SBIR/STTR data. Citations for journal articles produced under the award will appear on the DOE Energy Citations Database (www.osti.gov/energycitations).
- c. **Restrictions.** Reports submitted to the DOE Information Bridge must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

PUBLICATIONS

- a. You are encouraged to publish or otherwise make publicly available the results of the work conducted under the award.
- b. An acknowledgment of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project, as follows:

Acknowledgment: "This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

FEDERAL, STATE, AND MUNICIPAL REQUIREMENTS

You must obtain any required permits and comply with applicable federal, state, and municipal laws, codes,

and regulations for work performed under this award.

INTELLECTUAL PROPERTY PROVISIONS AND CONTACT INFORMATION

a. The intellectual property provisions applicable to this award are provided as an attachment to this award or are referenced on the Agreement Face Page. A list of all intellectual property provisions may be found at http://www.gc.doe.gov/financial_assistance_awards.htm.

b. Questions regarding intellectual property matters should be referred to the DOE Award Administrator and the Patent Counsel designated as the service provider for the DOE office that issued the award. The IP Service Providers List is found at [http://www.gc.doe.gov/documents/Intellectual_Property_\(IP\)_Service_Providers_for_Acquisition.pdf](http://www.gc.doe.gov/documents/Intellectual_Property_(IP)_Service_Providers_for_Acquisition.pdf)

LOBBYING RESTRICTIONS

By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

INSOLVENCY, BANKRUPTCY OR RECEIVERSHIP

a. You shall immediately notify the DOE of the occurrence of any of the following events: (i) you or your parent's filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (ii) your consent to the institution of an involuntary case under the Bankruptcy Act against you or your parent; (iii) the filing of any similar proceeding for or against you or your parent, or its consent to, the dissolution, winding-up or readjustment of your debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over you, under any other applicable state or federal law; or (iv) your insolvency due to your inability to pay your debts generally as they become due.

b. Such notification shall be in writing and shall: (i) specifically set out the details of the occurrence of an event referenced in paragraph a; (ii) provide the facts surrounding that event; and (iii) provide the impact such event will have on the project being funded by this award.

c. Upon the occurrence of any of the four events described in the first paragraph, DOE reserves the right to conduct a review of your award to determine your compliance with the required elements of the award (including such items as cost share, progress towards technical project objectives, and submission of required reports). If the DOE review determines that there are significant deficiencies or concerns with your performance under the award, DOE reserves the right to impose additional requirements, as needed, including (i) change your payment method; or (ii) institute payment controls.

d. Failure of the Recipient to comply with this provision may be considered a material noncompliance of this financial assistance award by the Contracting Officer.

DECONTAMINATION AND/OR DECOMMISSIONING (D &D) COSTS

Notwithstanding any other provisions of this Agreement, the Government shall not be responsible for or

have any obligation to the recipient for (i) Decontamination and/or Decommissioning (D&D) of any of the recipient's facilities, or (ii) any costs which may be incurred by the recipient in connection with the D&D of any of its facilities due to the performance of the work under this Agreement, whether said work was performed prior to or subsequent to the effective date of this Agreement.

PROPERTY

Real property, and equipment acquired by the Recipient shall be subject to the rules set forth in 10 CFR 600.130-137, 10 CFR 600.231-233, or 10 CFR 600.320-324 as applicable.

Consistent with the goals and objectives of this project, the Recipient may continue to use Recipient acquired property beyond the Period of Performance, without obligation, during the period of such use, to extinguish DOE's conditional title to such property as described in 10 CFR 600.132-135, 10 CFR 600.231-233, 600.321-324, subject to the following: (a) the Recipient continues to utilize such property for the objectives of the project as set forth in the Statement of Project Objectives; (b) DOE retains the right to periodically ask for, and the Recipient agrees to provide, reasonable information concerning the use and condition of the property; and (c) the Recipient follows the property disposition rules set forth in the applicable sections of 10 CFR Part 600, if the property is no longer used by the Recipient for the objectives of the project, and the fair market value of property exceeds \$5,000.

Once the per unit fair market value of the property is less than \$5,000, pursuant to the applicable sections of 10 CFR Part 600, DOE's residual interest in the property shall be extinguished and Recipient shall have no further obligation to the DOE with respect to the property.

The regulations as set forth in 10 CFR Part 600 and the requirements of this article shall also apply to property in the possession of any team member, sub-recipient or other entity where such property was acquired in whole in part with funds provided by DOE under this grant or where such property was counted as cost-sharing under the grant.

FINAL INCURRED COST AUDIT

In accordance with 10 CFR 600, DOE reserves the right to initiate a final incurred cost audit on this award. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

INDEMNITY

The Recipient shall indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorneys' fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of or damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of Government officers, agents or employees, or to the extent such liability may be covered by applicable allowable costs provisions.

ADVANCE PATENT WAIVER

DOE is preparing a Class Waiver of Patent Rights for technology developed under DOE funded awards relating to DOE's Recovery Act – Smart Grid Demonstrations Program; DOE Funding Opportunity Announcement DE-FOA-0000036. If the class waiver is granted and the Recipient elects to participate in it, DOE will modify this award to incorporate the patent waiver terms and conditions. These patent waiver terms and conditions will be in effect retroactive to the signing of this award.

SPECIAL PROVISIONS RELATING TO WORK FUNDED UNDER AMERICAN RECOVERY

AND REINVESTMENT ACT OF 2009 (Mar 2009)**Preamble**

The American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, (Recovery Act) was enacted to preserve and create jobs and promote economic recovery, assist those most impacted by the recession, provide investments needed to increase economic efficiency by spurring technological advances in science and health, invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits, stabilize State and local government budgets, in order to minimize and avoid reductions in essential services and counterproductive State and local tax increases. Recipients shall use grant funds in a manner that maximizes job creation and economic benefit.

The Recipient shall comply with all terms and conditions in the Recovery Act relating generally to governance, accountability, transparency, data collection and resources as specified in Act itself and as discussed below.

Recipients should begin planning activities for their first tier subrecipients, including obtaining a DUNS number (or updating the existing DUNS record), and registering with the Central Contractor Registration (CCR).

Be advised that Recovery Act funds can be used in conjunction with other funding as necessary to complete projects, but tracking and reporting must be separate to meet the reporting requirements of the Recovery Act and related guidance. For projects funded by sources other than the Recovery Act, Contractors must keep separate records for Recovery Act funds and to ensure those records comply with the requirements of the Act.

The Government has not fully developed the implementing instructions of the Recovery Act, particularly concerning specific procedural requirements for the new reporting requirements. The Recipient will be provided these details as they become available. The Recipient must comply with all requirements of the Act. If the recipient believes there is any inconsistency between ARRA requirements and current award terms and conditions, the issues will be referred to the Contracting Officer for reconciliation.

Definitions

For purposes of this clause, Covered Funds means funds expended or obligated from appropriations under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5. Covered Funds will have special accounting codes and will be identified as Recovery Act funds in the grant, cooperative agreement or TIA and/or modification using Recovery Act funds. Covered Funds must be reimbursed by September 30, 2015.

Non-Federal employer means any employer with respect to covered funds -- the contractor, subcontractor, grantee, or recipient, as the case may be, if the contractor, subcontractor, grantee, or recipient is an employer; and any professional membership organization, certification of other professional body, any agent or licensee of the Federal government, or any person acting directly or indirectly in the interest of an employer receiving covered funds; or with respect to covered funds received by a State or local government, the State or local government receiving the funds and any contractor or subcontractor receiving the funds and any contractor or subcontractor of the State or local government; and does not mean any department, agency, or other entity of the federal government.

Recipient means any entity that receives Recovery Act funds directly from the Federal government (including Recovery Act funds received through grant, loan, or contract) other than an individual and includes a State that receives Recovery Act Funds.

Special Provisions

A. Flow Down Requirement

Recipients must include these special terms and conditions in any subaward.

B. Segregation of Costs

Recipients must segregate the obligations and expenditures related to funding under the Recovery Act. Financial and accounting systems should be revised as necessary to segregate, track and maintain these funds apart and separate from other revenue streams. No part of the funds from the Recovery Act shall be commingled with any other funds or used for a purpose other than that of making payments for costs allowable for Recovery Act projects.

C. Prohibition on Use of Funds

None of the funds provided under this agreement derived from the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be used by any State or local government, or any private entity, for any casino or other gambling establishment, aquarium, zoo, golf course, or swimming pool.

D. Access to Records

With respect to each financial assistance agreement awarded utilizing at least some of the funds appropriated or otherwise made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, any representative of an appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1988 (5 U.S.C. App.) or of the Comptroller General is authorized --

(1) to examine any records of the contractor or grantee, any of its subcontractors or subgrantees, or any State or local agency administering such contract that pertain to, and involve transactions that relate to, the subcontract, subcontract, grant, or subgrant; and

(2) to interview any officer or employee of the contractor, grantee, subgrantee, or agency regarding such transactions.

E. Publication

An application may contain technical data and other data, including trade secrets and/or privileged or confidential information, which the applicant does not want disclosed to the public or used by the Government for any purpose other than the application. To protect such data, the applicant should specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the application with the following Notice as well as referring to the Notice on each page to which the Notice applies:

Notice of Restriction on Disclosure and Use of Data

The data contained in pages ---- 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 here 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.

Information about this agreement will be published on the Internet and linked to the website www.recovery.gov, maintained by the Accountability and Transparency Board. The Board may exclude posting contractual or other information on the website on a case-by-case basis when necessary to protect national security or to protect information that is not subject to disclosure under sections 552 and 552a of

title 5, United States Code.

F. Protecting State and Local Government and Contractor Whistleblowers.

The requirements of Section 1553 of the Act are summarized below. They include, but are not limited to:

Prohibition on Reprisals: An employee of any non-Federal employer receiving covered funds under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Accountability and Transparency Board, an inspector general, the Comptroller General, a member of Congress, a State or Federal regulatory or law enforcement agency, a person with supervisory authority over the employee (or other person working for the employer who has the authority to investigate, discover or terminate misconduct), a court or grand jury, the head of a Federal agency, or their representatives information that the employee believes is evidence of:

- gross mismanagement of an agency contract or grant relating to covered funds;
- a gross waste of covered funds;
- a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
- an abuse of authority related to the implementation or use of covered funds; or
- as violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.

Agency Action: Not later than 30 days after receiving an inspector general report of an alleged reprisal, the head of the agency shall determine whether there is sufficient basis to conclude that the non-Federal employer has subjected the employee to a prohibited reprisal. The agency shall either issue an order denying relief in whole or in part or shall take one or more of the following actions:

- Order the employer to take affirmative action to abate the reprisal.
- Order the employer to reinstate the person to the position that the person held before the reprisal, together with compensation including back pay, compensatory damages, employment benefits, and other terms and conditions of employment that would apply to the person in that position if the reprisal had not been taken.
- Order the employer to pay the employee an amount equal to the aggregate amount of all costs and expenses (including attorneys' fees and expert witnesses' fees) that were reasonably incurred by the employee for or in connection with, bringing the complaint regarding the reprisal, as determined by the head of a court of competent jurisdiction.

Nonenforceability of Certain Provisions Waiving Rights and remedies or Requiring Arbitration: Except as provided in a collective bargaining agreement, the rights and remedies provided to aggrieved employees by this section may not be waived by any agreement, policy, form, or condition of employment, including any predispute arbitration agreement. No predispute arbitration agreement shall be valid or enforceable if it requires arbitration of a dispute arising out of this section.

Requirement to Post Notice of Rights and Remedies: Any employer receiving covered funds under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, shall post notice of the rights and remedies as required therein. (Refer to section 1553 of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, www.Recovery.gov, for specific requirements of this section and prescribed language for the notices.).

G. RESERVED

H. False Claims Act

Recipient and sub-recipients shall promptly refer to the DOE or other appropriate Inspector General any

credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity or similar misconduct involving those funds.

I. Information in Support of Recovery Act Reporting

Recipient may be required to submit backup documentation for expenditures of funds under the Recovery Act including such items as timecards and invoices. Recipient shall provide copies of backup documentation at the request of the Contracting Officer or designee.

J. Availability of Funds

Funds appropriated under the Recovery Act and obligated to this award are available for reimbursement of costs until September 30, 2015.

REPORTING AND REGISTRATION REQUIREMENTS UNDER SECTION 1512 OF THE RECOVERY ACT

(a) This award requires the recipient to complete projects or activities which are funded under the American Recovery and Reinvestment Act of 2009 (Recovery Act) and to report on use of Recovery Act funds provided through this award. Information from these reports will be made available to the public.

(b) The reports are due no later than ten calendar days after each calendar quarter in which the recipient receives the assistance award funded in whole or in part by the Recovery Act.

(c) Recipients and their first-tier recipients must maintain current registrations in the Central Contractor Registration (<http://www.ccr.gov>) at all times during which they have active federal awards funded with Recovery Act funds. A Dun and Bradstreet Data Universal Numbering System (DUNS) Number (<http://www.dnb.com>) is one of the requirements for registration in the Central Contractor Registration.

(d) The recipient shall report the information described in section 1512(c) of the Recovery Act using the reporting instructions and data elements that will be provided online at <http://www.FederalReporting.gov> and ensure that any information that is pre-filled is corrected or updated as needed.

WAGE RATE REQUIREMENTS UNDER SECTION 1606 OF THE RECOVERY ACT

(a) Section 1606 of the Recovery Act requires that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to the Recovery Act shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code.

Pursuant to Reorganization Plan No. 14 and the Copeland Act, 40 U.S.C. 3145, the Department of Labor has issued regulations at 29 CFR parts 1, 3, and 5 to implement the Davis-Bacon and related Acts. Regulations in 29 CFR 5.5 instruct agencies concerning application of the standard Davis-Bacon contract clauses set forth in that section. Federal agencies providing grants, cooperative agreements, and loans under the Recovery Act shall ensure that the standard Davis-Bacon contract clauses found in 29 CFR 5.5(a) are incorporated in any resultant covered contracts that are in excess of \$2,000 for construction, alteration or repair (including painting and decorating).

(b) For additional guidance on the wage rate requirements of section 1606, contact your awarding agency. Recipients of grants, cooperative agreements and loans should direct their initial inquiries concerning the application of Davis-Bacon requirements to a particular federally assisted project to the Federal agency

funding the project. The Secretary of Labor retains final coverage authority under Reorganization Plan Number 14.

**RECOVERY ACT TRANSACTIONS LISTED IN SCHEDULE OF EXPENDITURES OF
FEDERAL AWARDS AND RECIPIENT RESPONSIBILITIES FOR INFORMING
SUBRECIPIENTS**

(a) To maximize the transparency and accountability of funds authorized under the American Recovery and Reinvestment Act of 2009 (Pub. L. 111--5) (Recovery Act) as required by Congress and in accordance with 2 CFR 215.21 "Uniform Administrative Requirements for Grants and Agreements" and OMB Circular A--102 Common Rules provisions, recipients agree to maintain records that identify adequately the source and application of Recovery Act funds. OMB Circular A--102 is available at <http://www.whitehouse.gov/omb/circulars/a102/a102.html>.

(b) For recipients covered by the Single Audit Act Amendments of 1996 and OMB Circular A--133, "Audits of States, Local Governments, and Non-Profit Organizations," recipients agree to separately identify the expenditures for Federal awards under the Recovery Act on the Schedule of Expenditures of Federal Awards (SEFA) and the Data Collection Form (SF--SAC) required by OMB Circular A--133. OMB Circular A--133 is available at <http://www.whitehouse.gov/omb/circulars/a133/a133.html>. This shall be accomplished by identifying expenditures for Federal awards made under the Recovery Act separately on the SEFA, and as separate rows under Item 9 of Part III on the SF--SAC by CFDA number, and inclusion of the prefix "ARRA-" in identifying the name of the Federal program on the SEFA and as the first characters in Item 9d of Part III on the SF--SAC.

(c) Recipients agree to separately identify to each subrecipient, and document at the time of subaward and at the time of disbursement of funds, the Federal award number, CFDA number, and amount of Recovery Act funds. When a recipient awards Recovery Act funds for an existing program, the information furnished to subrecipients shall distinguish the subawards of incremental Recovery Act funds from regular subawards under the existing program.

(d) Recipients agree to require their subrecipients to include on their SEFA information to specifically identify Recovery Act funding similar to the requirements for the recipient SEFA described above. This information is needed to allow the recipient to properly monitor subrecipient expenditure of ARRA funds as well as oversight by the Federal awarding agencies, Offices of Inspector General and the Government Accountability Office.

DAVIS BACON ACT AND CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Definitions: For purposes of this article, Davis Bacon Act and Contract Work Hours and Safety Standards Act, the following definitions are applicable:

(1) "Award" means any grant, cooperative agreement or technology investment agreement made with Recovery Act funds by the Department of Energy (DOE) to a Recipient. Such Award must require compliance with the labor standards clauses and wage rate requirements of the Davis-Bacon Act (DBA) for work performed by all laborers and mechanics employed by Recipients (other than a unit of State or local government whose own employees perform the construction) Subrecipients, Contractors and subcontractors.

(2) "Contractor" means an entity that enters into a Contract. For purposes of these clauses, Contractor shall include (as applicable) prime contractors, Recipients, Subrecipients, and Recipients' or Subrecipients' contractors, subcontractors, and lower-tier subcontractors. "Contractor" does not mean a unit of State or local government where construction is performed

by its own employees.”

(3) “Contract” means a contract executed by a Recipient, Subrecipient, prime contractor or any tier subcontractor for construction, alteration, or repair. It may also mean (as applicable) (i) financial assistance instruments such as grants, cooperative agreements, technology investment agreements, and loans; and, (ii) Sub awards, contracts and subcontracts issued under financial assistance agreements. “Contract” does not mean a financial assistance instrument with a unit of State or local government where construction is performed by its own employees.

(4) “Contracting Officer” means the DOE official authorized to execute an Award on behalf of DOE and who is responsible for the business management and non-program aspects of the financial assistance process.

(5) “Recipient” means any entity other than an individual that receives an Award of Federal funds in the form of a grant, cooperative agreement or technology investment agreement directly from the Federal Government and is financially accountable for the use of any DOE funds or property, and is legally responsible for carrying out the terms and conditions of the program and Award.

(6) “Subaward” means an award of financial assistance in the form of money, or property in lieu of money, made under an award by a Recipient to an eligible Subrecipient or by a Subrecipient to a lower- tier subrecipient. The term includes financial assistance when provided by any legal agreement, even if the agreement is called a contract, but does not include the Recipient’s procurement of goods and services to carry out the program nor does it include any form of assistance which is excluded from the definition of “Award” above.

(7) “Subrecipient” means a non-Federal entity that expends Federal funds received from a Recipient to carry out a Federal program, but does not include an individual that is a beneficiary of such a program.

(a) Davis Bacon Act

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work

actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The Contracting Officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the Contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The Department of Energy or the Recipient or Subrecipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the Contract, the Department of Energy, Recipient, or Subrecipient, may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) (A) The Contractor shall submit weekly for each week in which any Contract work is performed a copy of all payrolls to the Department of Energy if the agency is a party to the Contract, but if the agency is not such a party, the Contractor will submit the payrolls to the Recipient or Subrecipient (as applicable), applicant, sponsor, or owner, as the case may be, for transmission to the Department of Energy. The

payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Department of Energy if the agency is a party to the Contract, but if the agency is not such a party, the Contractor will submit them to the Recipient or Subrecipient (as applicable), applicant, sponsor, or owner, as the case may be, for transmission to the Department of Energy, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the Recipient or Subrecipient (as applicable), applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 3729 of title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph

(a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Department of Energy or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training

Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this Contract.

(6) Contracts and Subcontracts. The Recipient, Subrecipient, the Recipient's and Subrecipient's contractors and subcontractor shall insert in any Contracts the clauses contained herein in (a)(1) through (10) and such other clauses as the Department of Energy may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Recipient shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of the paragraphs in this clause.

(7) Contract termination: debarment. A breach of the Contract clauses in 29 CFR 5.5 may be grounds for termination of the Contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this Contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Recipient, Subrecipient, the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this Contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-

Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No Contractor or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The Department of Energy or the Recipient or Subrecipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Contracts and Subcontracts. The Recipient, Subrecipient, and Recipient's and Subrecipient's contractor or subcontractor shall insert in any Contracts, the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Recipient shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(5) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the Contract for all laborers and mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked,

deductions made, and actual wages paid. The records to be maintained under this paragraph shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Energy and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

RECIPIENT FUNCTIONS

(1) This delegation of Department of Energy (DOE) functions to the Recipient applies only to DBA effort performed by Subrecipients and Contractors under this award. Those functions are not delegated to the Recipient for any DBA effort performed by employees of the Recipient under this award. On behalf of the Department of Energy (DOE), Recipient shall perform the following functions:

- (a) Obtain, maintain, and monitor all DBA certified payroll records submitted by the Subrecipients and Contractors at any tier under this Award;
- (b) Review all DBA certified payroll records for compliance with DBA requirements, including applicable DOL wage determinations;
- (c) Notify DOE of any non-compliance with DBA requirements by Subrecipients or Contractors at any tier, including any non-compliances identified as the result of reviews performed pursuant to paragraph (b) above;
- (d) Address any Subrecipient and any Contractor DBA non-compliance issues; if DBA non-compliance issues cannot be resolved in a timely manner, forward complaints, summary of investigations and all relevant information to DOE;
- (e) Provide DOE with detailed information regarding the resolution of any DBA non-compliance issues;
- (f) Perform services in support of DOE investigations of complaints filed regarding noncompliance by Subrecipients and Contractors with DBA requirements;
- (g) Perform audit services as necessary to ensure compliance by Subrecipients and Contractors with DBA requirements and as requested by the Contracting Officer; and
- (h) Provide copies of all records upon request by DOE or DOL in a timely manner.

(2) All records maintained on behalf of the DOE in accordance with paragraph (1) above are federal government (DOE) owned records. DOE or an authorized representative shall be granted access to the records at all times.

(3) In the event of, and in response to any Freedom of Information Act, 5 U.S.C. 552, requests submitted to DOE, Recipient shall provide such records to DOE within 5 business days of receipt of a request from DOE.

CLB-1003
Intellectual Property Provisions (CLB-1003)
Cooperative Agreement
Research, Development, or Demonstration
Large Businesses, State and Local Governments, and Foreign Entities

- | | |
|----------------------------------|--|
| 01. FAR 52.227-1 | Authorization and Consent (JUL 1995)-Alternate I (APR 1984) |
| 02. FAR 52.227-2 | Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996) |
| 03. 10 CFR 600.325
Appendix A | Rights in Data - General (OCT 2003) |
| 04. FAR 52.227-23 | Rights to Proposal Data (Technical) (JUN 1987) |
| 05. | Patent Rights – Waiver as modified by 10 C.F.R. 784, DOE Patent Waiver Regulations |

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

* If a waiver of patent rights is granted, then provisions approved by the DOE patent counsel, in accordance with 10 CFR 784, will be substituted for this Patent Rights provision.

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

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

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

(End of clause)

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

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

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

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

(End of clause)

03. 10 CFR Part 600.325 Appendix A, Rights in Data - General (OCT 2003)

(a) Definitions

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

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

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

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

Limited rights, as used in this clause, means the rights of the Government in limited rights data as set forth in the Limited Rights Notice of subparagraph (g)(2) if included in this clause.

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

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

Restricted rights, as used in this clause, means the rights of the Government in restricted computer software, as set forth in a Restricted Rights Notice of subparagraph (g)(3) if included in this clause, or as otherwise may be provided in a collateral agreement incorporated in and made part of this contract, including minor modifications of such computer software.

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

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

(b) Allocations of Rights

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

- (i) Data first produced in the performance of this agreement;
- (ii) Form, fit, and function data delivered under this agreement;
- (iii) Data delivered under this agreement (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this agreement; and
- (iv) All other data delivered under this agreement unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this clause.

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

- (i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Recipient in the performance of this agreement, unless provided otherwise in paragraph (d) of this clause;
- (ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this clause;
- (iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take over appropriate action, in accordance with paragraphs (e) and (f) of this clause; and
- (iv) Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in subparagraph (c)(1) of this clause.

(c) Copyright

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

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

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

(d) Release, Publication and Use of Data

(1) The Recipient shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Recipient in the performance of this agreement, except to the extent such data may

be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this agreement.

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

(e) Unauthorized Marking of Data

(1) Notwithstanding any other provisions of this agreement concerning inspection or acceptance, if any data delivered under this agreement are marked with the notices specified in subparagraph (g)(2) or (g)(3) of this clause and use of such is not authorized by this clause, or if such data bears any other restrictive or limiting markings not authorized by this agreement, the Contracting Officer may at any time either return the data to the Recipient or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

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

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

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

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

(f) Omitted or Incorrect Markings

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

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

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

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

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

(2) The Contracting Officer may also:

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

(ii) Correct any incorrect notices.

(g) Protection of Limited Rights Data and Restricted Computer Software

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

(h) Subaward/Contract

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

(i) Additional Data Requirements

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

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

(End of clause)

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

Except for data contained on pages **41-45**, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data--General" clause contained in this contract) in and to the technical data contained in the proposal dated **August 18, 2009 and July 8, 2010**, upon which this contract is based.

05. Patent Rights - Waiver as modified by 10 C.F.R. 784, DOE Patent Waiver Regulations

(a) Definitions.

As used in this clause:

Background patent means a domestic patent covering an invention or discovery which is not a Subject Invention and which is owned or controlled by the Contractor at any time through the completion of this contract:

- (i) Which the Contractor, but not the Government, has the right to license to others without obligation to pay royalties thereon, and
- (ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.

Contract means any contract, grant, agreement, understanding, or other arrangement, which includes research, development, or demonstration work, and includes any assignment or substitution of parties.

DOE patent waiver regulations means the Department of Energy patent waiver regulations at 10 CFR Part 784.

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

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

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

Patent Counsel means the Department of Energy Patent Counsel assisting the procuring activity.

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

Secretary means the Secretary of Energy.

Small business firm means a small business concern as defined at Section 2 of the Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

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

(b) Allocation of principal rights.

Whereas DOE has granted a waiver of rights to subject inventions to the Contractor, the Contractor may elect to retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. "202 and 203. With respect to any subject invention in which the Contractor elects to retain title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention disclosure, election of title, and filing of patent applications by Contractor.

(1) The Contractor shall disclose each subject invention to the Patent Counsel within six months after conception or first actual reduction to practice, whichever occurs first in the course of or under this contract, but in any event, prior to any sale, public use, or public disclosure of such invention known to the Contractor. The disclosure to the Patent Counsel shall be in the form of a written report and shall identify the inventors and the contract under which the invention was made. It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale, or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Patent Counsel, the Contractor shall promptly notify the Patent Counsel of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(2) The Contractor shall elect in writing whether or not to retain title to any such invention by notifying the Patent Counsel at the time of disclosure or within 8 months of disclosure, as to those countries (including the United States) in

which the Contractor will retain title; provided, that in any case where publication, on sale, or public use has initiated the 1-year statutory period wherein valid patent protection can still be obtained in the United States, the period of election of title may be shortened by the Agency to a date that is no more than 60 days prior to the end of the statutory period. The Contractor shall notify the Patent Counsel as to those countries (including the United States) in which the Contractor will retain title not later than 60 days prior to the end of the statutory period.

(3) The Contractor shall file its United States patent application on an elected invention within 1 year after election, but not later than at least 60 days prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor shall file patent applications in additional countries (including the European Patent Office and under the Patent Cooperation Treaty) within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where foreign filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to the Patent Counsel, election, and filing may, at the discretion of DOE, be granted, and will normally be granted unless the Patent Counsel has reason to believe that a particular extension would prejudice the Government's interest.

(d) Conditions when the Government may obtain title notwithstanding an existing waiver.
The Contractor shall convey to DOE, upon written request, title to any subject invention--

(1) If the Contractor elects not to retain title to a subject invention;

(2) If the Contractor fails to disclose or elect the subject invention within the times specified in paragraph (c) of this clause (provided that DOE may only request title within 60 days after learning of the Contractor's failure to report or elect within the specified times);

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

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

(5) If the waiver authorizing the use of this clause is terminated as provided in paragraph (p) of this clause.

(e) Minimum rights to Contractor when the Government retains title.

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

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

(3) Before revocation or modification of the license, DOE shall furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor shall be allowed 30 days (or such other time as may be authorized by DOE for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or

modified. The Contractor has the right to appeal, in accordance with applicable agency licensing regulations and 37 CFR part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(f) Contractor action to protect the Government's interest.

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

(i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and

(ii) convey title to DOE when requested under paragraphs (d) and (n)(2) of this clause, and to enable the Government to obtain patent protection throughout the world in that subject invention.

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

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

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

(5) The Contractor shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in the course of or under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Patent Counsel a description of such procedures for evaluation and for determination as to their effectiveness.

(6) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived through Military Assistance Program of the Government or otherwise derived through the Government; to refund any amounts received as royalty charges on the subject invention in acquisitions for, or on behalf of, the Government; and to provide for such refund in any instrument transferring rights in the invention to any party.

(7) The Contractor shall furnish the Patent Counsel the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Patent Counsel) from the date of the contract, listing subject inventions during that period and stating that all subject inventions have been disclosed or that there are no such inventions.

(ii) A final report, within 3 months after completion of the contracted work, listing all subject inventions or stating that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

(8) The Contractor shall promptly notify the Patent Counsel in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Patent Counsel, the Contractor shall furnish a copy of such subcontract, and no more frequently than annually, a listing of the subcontracts that have been awarded.

(9) The Contractor shall provide, upon request, the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and patent number and issue date for any subject invention for which the Contractor has retained title.

(10) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(g) Subcontracts.

(1) Unless otherwise directed by the Contracting Officer, the Contractor shall include the clause at 48 CFR 952.227-11, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or nonprofit organization, except where the work of the subcontract is subject to an Exceptional Circumstances Determination by DOE. In all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work, the Contractor shall include the patent rights clause at 48 CFR 952.227-13 (suitably modified to identify the parties).

(2) The Contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(3) In the case of subcontractors at any tier, the Department, the subcontractor, and Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Department with respect to those matters covered by this clause.

(4) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contractor shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(h) Reporting on utilization of subject inventions.

The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by DOE in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(i) Preference for United States industry.

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

(j) March-in rights.

The Contractor agrees that with respect to any subject invention in which it has acquired title, DOE has the right in accordance with the procedures in 48 CFR 27.304-1(g) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that--

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

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

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

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

(k) Background Patents [reserved]

(l) Communications.

All reports and notifications required by this clause shall be submitted to the Patent Counsel unless otherwise instructed.

(m) Other inventions.

Nothing contained in this clause shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention, except with respect to Background Patents, above.

(n) Examination of records relating to inventions.

(1) The Contracting Officer or any authorized representative shall, until 3 years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether--

(i) Any such inventions are subject inventions;

(ii) The Contractor has established and maintains the procedures required by paragraphs (f)(2) and (f)(5) of this clause; and

(iii) The Contractor and its inventor have complied with the procedures.

(2) If the Contracting Officer determines that an inventor has not disclosed a subject invention to the Contractor in accordance with the procedures required by paragraph (f)(5) of this clause, the Contracting Officer may, within 60 days after the determination, request title in accordance with paragraphs (d)(2) and (d)(3) of this clause. However, if the Contractor establishes that the failure to disclose did not result from the Contractor's fault or negligence, the Contracting Officer shall not request title.

(3) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to DOE for a determination of ownership rights.

(4) Any examination of records under this paragraph shall be conducted in such a manner as to protect the confidentiality of the information involved.

(o) Withholding of payment.

NOTE: This paragraph does not apply to subcontracts or grants.

(1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of the contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to--

- (i) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to paragraph (f)(5) of this clause;
- (ii) Disclose any subject invention pursuant to paragraph (c)(1) of this clause;
- (iii) Deliver acceptable interim reports pursuant to paragraph (f)(7)(I) of this clause;
- (iv) Provide the information regarding subcontracts pursuant to paragraph (f)(6) of this clause; or
- (v) Convey to the Government, using a DOE-approved form, the title and/or rights of the Government in each subject invention as required by this clause.

(2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.

(3) Final payment under this contract shall not be made before the Contractor delivers to the Patent Counsel all disclosures of subject inventions required by paragraph (c)(1) of this clause, an acceptable final report pursuant to paragraph (f)(7)(ii) of this clause, and all past due confirmatory instruments, and the Patent Counsel has issued a patent clearance certification to the Contracting Officer.

(4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. If the maximum amount authorized above is already being withheld under other provisions of the contract, no additional amount shall be withheld under this paragraph. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(p) Waiver Terminations.

Any waiver granted to the Contractor authorizing the use of this clause (including any retention of rights pursuant thereto by the Contractor under paragraph (b) of this clause) may be terminated at the discretion of the Secretary or his designee in whole or in part, if the request for waiver by the Contractor is found to contain false material statements or nondisclosure of material facts, and such were specifically relied upon by DOE in reaching the waiver determination. Prior to any such termination, the Contractor will be given written notice stating the extent of such proposed termination and the reasons therefor, and a period of 30 days, or such longer period as the Secretary or his designee shall determine for good cause shown in writing, to show cause why the waiver of rights should not be so terminated. Any waiver termination shall be subject to the Contractor's minimum license as provided in paragraph (e) of this clause.

(q) Atomic Energy.

No claim for pecuniary award or compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of or under this contract.

(r) Publication.

It is recognized that during the course of work under this contract, the contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the contractor, approval for release of publication shall be secured from Patent Counsel prior to any such release or publication. In appropriate circumstances, and after consultation with the contractor, Patent Counsel may waive the right of prepublication review.

(s) Forfeiture of rights in unreported subject inventions.

(1) The contractor shall forfeit and assign to the Government, at the request of the Secretary of Energy or designee, all rights in any subject invention which the contractor fails to report to Patent Counsel within six months after the time the contractor:

- (i) Files or causes to be filed a United States or foreign patent application thereon; or
- (ii) Submits the final report required by paragraph (f)(7)(ii) of this clause, whichever is later.

(2) However, the Contractor shall not forfeit rights in a subject invention if, within the time specified in paragraph (n)(1) of this clause, the contractor:

- (i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or
- (ii) Contending that the subject invention is not a subject invention, the contractor nevertheless discloses the subject invention and all facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer, or
- (iii) Establishes that the failure to disclose did not result from the contractor's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Contracting Officer to be forfeited (such determination to be a Final Decision under the Disputes clause of this contract), the contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph shall be in addition to and shall not supersede any other rights and remedies which the Government may have with respect to subject inventions.

(t) U. S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

(End of clause)

DE-OE0000221 - STATEMENT OF PROJECT OBJECTIVES
Kansas City Power & Light (KCP&L)
KCP&L GREEN IMPACT ZONE SMARTGRID DEMONSTRATION

A. Project Objectives

Kansas City Power & Light (Recipient) will design and deploy a demonstration program to develop, operate, test and report on a complete, end-to-end regional SmartGrid demonstration. This SmartGrid demonstration project will provide area businesses and residents with enhanced reliability and efficiency through real-time information about electricity supply and demand. It will also enable customers to manage their electricity use, and save money, by providing useful information about electricity prices. Co-located renewable energy sources, such as solar and other parallel generation, will be placed in the Demonstration Area and seamlessly feed into the energy grid. The Recipient will use components such as Distribution Management System (DMS) or Advanced Metering Infrastructure (AMI) technologies to test and evaluate the solution's ability to achieve a complete suite of prospective SmartGrid benefits such as greater energy efficiency, reduced cost, improved reliability, more transparent information and an improved environmental footprint. The Recipient is proposing to implement this demonstration project through six project phases, each with the following objectives:

Phase I – Project Definition, National Environmental Protection Act (NEPA) Compliance, Interoperability and Cyber Security Plan, and Metrics and Benefits Reporting objective will be to refine project scope, definition and ongoing project management.

Phase II – Project Administration & Detail Design will include detailed project design tasks in addition to ongoing Project Management activities

Phase III – Project Performance Baseline objective will be to compile and/or collect baseline grid and end-use data for the demonstration area.

Phase IV – Transmission and Distribution (T&D) SmartGrid Infrastructure Deployment objective will be to implement the SmartSubstation, DMS and Advanced Distribution Automation (ADA) components.

Phase V – Distributed Energy Resource (DER) Deployment objective will be to implement the SmartEnd-Use, SmartGeneration, and DER/DR Management components.

Phase VI – Data Collection, Reporting & Project Conclusion objective will be to operate the integrated end-to-end SmartGrid demonstration systems and collect 24 months of grid and end-use data.

B. Scope of Work

The SmartGrid Demonstration will focus on Recipient's Midtown Substation and multiple distribution circuits serving approximately 14,000 customers across 3.75 square miles with

total demand of up to approximately 69.5 MVA. Scope of work will touch every functional area of the electricity supply chain, including:

- **SmartGeneration:** To demonstrate and test renewable energy and distributed generation sources such as rooftop solar, distribution voltage reduction, demand response, stand-by to parallel generation conversion and through a separate grant application, large scale energy storage. A Distributed Energy Resource Management (DERM) system will be developed and implemented to manage these resources and provide the needed resource availability to the DMS and energy trading operators.
- **SmartSubstation:** Replace and augment existing electro-mechanical relays with state-of-the-art solid state relays and install numerous other upgrades to the Midtown Substation that will enhance the operating performance, reliability and productivity of this asset. The SmartSubstation will be based on the latest National Institute of Standards and Technology (NIST) Interoperability Framework Standards to ensure accurate operation and the appropriate level of cyber security. The SmartSubstation will implement a Distributed Control and Data Acquisition (DCADA) system through peer-to-peer device communications and enable —first responder device control operations.
- **SmartDistribution:** Deploy a 2-way AMI system with DMS and ADA components and functionality on selected feeders. The SmartDistribution component will implement a distributed, hierarchical system monitoring and control infrastructure. The DMS will coordinate with the SmartSubstation DCADA system to perform centralized operations monitoring and control functions and will be electronically isolated from the production Energy Management System SCADA (Supervisory Control and Data Acquisition) and Outage Management System (OMS). The AMI communication infrastructure will establish 2-way communication between distribution line devices and the DMS and the SmartSubstation DCADA processors. The ADA component will deploy distributed automation solutions to enable more effective grid monitoring and automated voltage control and self repair functionality.
- **SmartEnd Use:** Demonstrate the viability of the wider SmartGrid to develop solutions that will enable end-users to change their energy consumption behavior for the positive. Several Smart Home/Building technologies will be deployed to demonstrate and test several methods of consumer energy usage information communication; several levels of energy management sophistication, and grid operation integration. The Recipient will use multiple paths needed to meet the wide variety of customer expectations. The Recipient will provide additional programs, and tariffs that will be designed to test different dimensions of each solution. The goal will be to identify the most effective solutions that can deliver the savings in terms of consumption, efficiency and cost.

C. Tasks to Be Performed

The proposed project is organized into six phases. In Phase 1, the Recipient will develop the project approach, install a formal project management structure and ensure meeting NEPA compliance requirements, Cyber Security Plan, and Metrics and Benefits Reporting objectives are met. Phase 2 will be to perform detailed project definition and planning activities while initiating ongoing project management. In Phase 3, implementation of the

AMI solution this will gather baseline information around operational and financial performance of the network area covered by the SmartGrid demonstration. In Phase 4 the Recipient will deploy the T&D SmartGrid infrastructure components, including building a SmartSubstation implementing the ADA capabilities. Phase 5 will focus on deployment of DER applications such as SmartGeneration components, end-user incentive programs and the DERM systems implementation. Phase 6 will involve the actual operation, testing and demonstration of the solution and is expected to last approximately two years from mid 2012 to mid 2014. Specific tasks and milestones associated with each phase are discussed below:

Phase I – Project Definition, NEPA Compliance, Cyber Security, and Metrics and Benefits Reporting Plan.

Task 1.0 – Update Project Management Plan (PMP)

The Recipient shall update the PMP as submitted as part of the original application process. The PMP is a management tool and is continually evolving through review and reassessment and shall be updated subsequently with any major/significant project revisions. Please refer to the “Instructions for Preparation of Deliverables” document, Appendix 1 to this Statement of Project Objectives, for specific information regarding the required content of this report.

Task 1.1 – Revise Project Work Breakdown Structure

Task 1.2 – Revise Project Cost Estimates and Budget

Task 1.3 – Update Existing PMP Sections

Task 1.4 – Develop New PMP Sections

Task 1.5 – Submit Revised PMP to DOE

Task 2.0 – National Environmental Protection Act (NEPA) Compliance

If the DOE determines that the proposed project qualifies for a Categorical Exclusion under its NEPA regulations, then no additional NEPA analyses will be needed for the DOE to authorize the Recipient to proceed with the project. However, if the DOE determines that an Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, the Recipient shall work with the DOE to complete the NEPA process including performing further assessment, evaluation, analyses, and documentation to complete the EA or EIS prior to a decision by the DOE regarding authorization to proceed. Should an EA or EIS be necessary, the DOE reserves the right to use a third party contract arrangement.

Task 2.1 – NEPA Compliance Obtained from DOE

Task 3.0 – Develop Interoperability and Cyber Security (I&CS) Plan

The Recipient shall develop a comprehensive Interoperability and Cyber Security Plan (I&CS Plan) for approval by DOE. The I&CS Plan shall fully describe how the Recipient will address interoperability and cyber security in every phase of the engineering lifecycle of the project, including design, procurement, construction, installation, commissioning, and operation, as well as the ability to provide ongoing maintenance and support. The Recipient shall update the I&CS

Plan subsequent to any major/significant project revisions. Please refer to the “Instructions for Preparation of Deliverables” document, Appendix 1 to this Statement of Project Objectives, for specific information regarding the required content of this report.

Task 3.1 – Develop Initial Interoperability Plan

Task 3.2 – Develop Initial Cyber Security Plan

Task 3.3 – Interoperability & Cyber Security Plan Review

Task 4 – Develop Metrics and Benefits Reporting Plan

The Recipient shall develop a Metrics and Benefits Reporting Plan for DOE approval. The Plan shall fully describe how metrics and benefits information will be developed and reported to DOE, in order to assess the performance of demonstrated/deployed technology. The Plan will address improvements in or changes to grid/system configuration and performance, both technical and economic, with respect to the pre-deployment baseline configuration.

Recipients are encouraged to work collaboratively with DOE to seek guidance and clarification regarding questions in completing their Metrics and Benefits Reporting Plan. The Recipient will update the Metrics and Benefits Reporting Plan subsequently to any major/significant project revisions. Please refer to the “Instructions for Preparation of Deliverables” document, Appendix 1 to this Statement of Project Objectives, for specific information regarding the required content of this report.

Task 4.1 - Identify Initial Build & Impact Reporting Requirements

Task 4.2 - Determine State Commission Data Interests

Task 4.3 - Determine DOE Data Interest

Task 4.4 - Develop Benefits and Metrics Reporting Plan

Task 4.5 - Benefits and Metrics Reporting Plan Review

The Recipient shall not perform work on any subsequent Phases or Tasks until given written authorization from the DOE Project Officer. The Project Officer will evaluate the status of the Phase I work to determine which subsequent Phases or Tasks the Recipient may begin.

Phase II – Project Administration & Detailed Design

Task 5.0 – Project Management, Administration, and Reporting

The Recipient’s Project Management Office (PMO) will be centrally responsible for the management and delivery of the SmartGrid demonstration project and the PMO tasks will be ongoing through the length of the demonstration. The following tasks will be discussed more fully in the PMP.

Task 5.1 – Maintain PMP

Task 5.2 – Semi-Annual Project Review Meetings

Task 5.3 – Semi-Annual PMP Updates

Task 5.4 – DOE Peer Reviews & Reasonableness Review

Task 5.5 – Project Administration

Task 5.6 – Periodic Technology Performance Reporting

Task 5.7 – Topical Reporting

Task 5.8 – Technical Presentations

Task 5.9- Project Wrap-Up & Reporting

Task 6.0 – Public Outreach and Education Planning

The Recipient's Public Affairs and Energy Solutions professionals will collaborate with the Demonstration Partners to create a highly targeted public outreach, education, and customer enrollment program that achieves program goals and meets brand objectives and preferences for interacting with customers.

Task 6.1 – Initiate Relationships with Local SmartGrid Participants

Task 6.2 – Develop Public Outreach and Education Plan

Task 6.3 – Develop Public O&E Vehicles for Target Audiences

Task 6.4 – Develop O&E Promotions for Project Components

Task 6.5 – Maintain Relationships with SmartGrid Stakeholders

Task 6.6 – Public Outreach and Education Implementation Report

Task 7.0 –Project Integration Architecture Definition & Design

In this task, the requirements for the SmartGrid Demonstration will be further defined and finalized. It will include finalizing the functional, IT, and business requirements and the data collection and reporting requirements to support the DOE SmartGrid cost benefit analysis.

Task 7.1 – Apply IntelliGrid Methodology for Use Case and Req. Definition

Task 7.2 – Review and Revise Industry Use Cases for Project Use

Task 7.3 – Define Operational Test Plan for Demonstration

Task 7.4 - Data Collection Requirements and Data Reporting Review and Plan Refinement

Task 7.5 – Integration Requirement Review & Refinement

Task 7.6 – Cyber Security Requirement Review & Refinement

Task 7.7 – Project Integration Architecture & Design Document

Task 7.8 –Data and Technology Plan Review

Phase III – Establish SmartGrid Performance.

Task 8.0 – SmartMetering Implementation

This task includes the complete design, implementation and testing of the 2-way AMI system for the demonstration area. The AMI system vendor will be responsible for continuing to provide billing and outage information to existing production systems.

Task 8.1 – SmartMeter Partner Project Management

Task 8.2 – SmartMetering System Planning

Task 8.3 – SmartMetering Project Design/Development

Task 8.4 – SmartMetering Deployment

Task 8.5 – SmartMetering System Acceptance

Task 8.6 – SmartMetering Implementation Report

Task 9.0 – Performance Baseline Data Collection

In this task, a range of baseline data will be collected by individual project teams and across projects as defined in the project plan. This will include both operational/performance (reliability, usage, etc.) and financial (cost to serve, rates, etc.) information. A preliminary performance and cost model will be developed to define a baseline case for this project. The final

demonstration solution will be compared with this baseline case to measure the benefits of the approach and quantify performance relative to expectations.

Task 9.1 – Compile Listing of Accounts in Demonstration Area

Task 9.2 – Compile Historical System Performance Statistics

Task 9.3 – Compile Historical Consumer Daily/Monthly Usage Data

Task 9.4 – Collect Consumer 15 min. Interval Usage Data

Task 9.5 – Compile Consumer Baseline Interval Usage Statistics

Task 9.6 – Baseline Data Collection Report

Phase III - T&D SmartGrid Infrastructure Deployment

Task 10.0 – SmartSubstation Implementation

In this task, the Recipient will replace and augment existing electro-mechanical relays with state-of-the-art solid state relays and install transformer monitors and numerous other upgrades to the Midtown Substation that will greatly improve the reliability and productivity of this asset. In addition, this task also involves installing the local substation controller to provide local monitoring and control of substation Intelligent Electronic Devices (IEDs).

Task 10.1 – SmartSubstation Partner Project Management

Task 10.2 – SmartSubstation Design

Task 10.3 – Upgrade Relays & Install KCPL EMS Network

Task 10.4 – SmartSubstation Factory Configuration & FAT

Task 10.5 – SmartSubstation Bus 1&2 Configuration & SAT

Task 10.6 – Commission SmartSubstation Bus 1&2

Task 10.7 – Configure Remaining SmartSubstation Busses and Test

Task 10.8 – Commission SmartSubstation

Task 10.9 – SmartSubstation Implementation Report

Task 11.0 – SmartGrid IT Infrastructure and AMI Enhancements

In this task, the Recipient will enhance the initial SmartMeter AMI implementation by deploying a MDM system and enhanced AMI system security modules.

Task 11.1 – Enhanced AMI/FAN Security Implementation

Task 11.2 – Cyber Security Implementation and Configuration

Task 11.3 – Configure Enterprise Service Bus for SmartGrid

Task 11.4 – Meter Data Management System Implementation

Task 11.5 – AMI-HAN Configuration & Support

Task 12.0 – SmartDistribution DMS Implementation

In this task, Recipient will deploy a DMS, install to provide centralized oversight and management of the distribution grid. The DMS will be implemented with NIST SmartGrid Standards compliant interfaces with DRMS, MDM, and the hierarchal DCADA substation controller. In addition, the DMS will interface with the Recipient's GIS system to receive baseline and periodic updates to the network configuration.

Task 12.1 – SmartDistribution Partner Project Management

Task 12.2 – DMS Functional Review

Task 12.3 – DMS DB Modeling Overview/Training

- Task 12.4 – GIS-DNA Facility Migration Design**
- Task 12.5 – DMS InService Integration Designs**
- Task 12.6 – DMS Siemens Integration Design**
- Task 12.7 – Develop Acceptance Test Plan**
- Task 12.8 – Approval of Function Specifications & Test Plan**
- Task 12.9 – DMS Siemens Software Development**
- Task 12.10 – DMS Factory Configuration**
- Task 12.11 – DMS On-Site Implementation**
- Task 12.12 – Site Acceptance Testing (SAT)**
- Task 12.13 – Approval of DMS SAT**
- Task 12.14 – Ready for Live Operations**
- Task 12.15 – Commission SmartDistribution DMS Subsystem**
- Task 12.16 – SmartDistribution DMS Implementation Report**

Task 13.0 – SmartDistribution ADA 'First Responder' Implementation

In this task, the Recipient will deploy Advanced Distribution Automation (ADA) components and implement _‘first responder’ monitoring and control functions on selected feeders. This will involve the substation controller communicating in a coordinated manner with the central DMS and with remote ADA line devices over a Radio Frequency (RF) Field Area Network (FAN).

- Task 13.1 – 'First Responder' Functional Design, Implement**
- Task 13.2 – Design, Construct, & Test SmartDistribution FAN**
- Task 13.3 – Design, Construct & SmartDistribution Line Devices**
- Task 13.4– Develop & FAT 'First Responder' DCADA Functions**
- Task 13.5 – 'First Responder' On-Site Implementation & SAT**
- Task 13.6 – Commission SmartGrid 'First Responder' Subsystem**
- Task 13.7 – SmartDistribution 'First Responder' Implementation Report**

Phase V - Distributed Energy Resource Deployment

Task 14.0 – SmartEnd-Use Implementation

In this task, several SmartEnd-Use technologies will be deployed to demonstrate and evaluate several methods of communicating end-use consumption and control of consumer based DER, thus enabling customers to manage their electric usage more effectively.

- Task 14.1 – SmartEnd-Use Partner Project Management**
- Task 14.2 – SmartEnd-Use Requirements Definition**
- Task 14.3 –Implement Premise Energy Portal**
- Task 14.4 –Implement Premise EMS Web Portal**
- Task 14.5 – Implement Premise DER Web Portal**
- Task 14.6 – Deploy In-Home Energy Display Device**
- Task 14.7 – Develop, & Deploy SmartGrid Demonstration Home & Exhibit**
- Task 14.8 –Deploy Home EMS Devices & Thermostats**
- Task 14.9 – Design and Implement SmartGrid Time-of-use (TOU) Tariffs**
- Task 14.10 – Implement Commercial EMS Web Portal**
- Task 14.11 – Deploy Public Plug-In Hybrid Electric Vehicle (PHEV) Charging Stations**
- Task 14.12 – SmartEnd-Use Implementation Report**

Task 15.0 - SmartGeneration Deployment

In this task, the Recipient will work with select partners to install, demonstrate and test utility controlled renewable energy and distributed generation resources.

Task 15.1 – Design & Deploy Grid Connected Roof-Top Solar

Task 15.2 – Deploy the DR (AMI) Thermostat

Task 15.3 – Implement the Home Area Network (HAN) Pricing/Control Signals

Task 15.4 – Convert, Customer Stand-By to Parallel Generation

Task 15.5 – Deploy Grid Connected Battery Storage

Task 15.6 – SmartGeneration Implementation Report

Task 16.0 - Smart DER/DR Management Implementation

In this task a DERM system will be developed and implemented to manage DR/DER resources and provide the needed resource availability to the DMS and energy trading operators.

Task 16.1 – SmartDERM Partner Project Management

Task 16.2 – DERM Base System Implementation

Task 16.3 – DERM Rollout and Integration Planning

Task 16.4 – Implement & Test DER Management Sub-System

Task 16.5 – Implement & Test DR Management Sub-System

Task 16.6 – DR/DER Functional Testing

Task 16.7 – Commission DER/DR Management Subsystems

Task 16.8 – Smart DER/DR Implementation Report

Phase VI - Commissioning & Operation

Task 17.0 - Integrated System Operational Test & Demonstration

In this task, the integrated operation of all SmartGrid demonstration projects, grid operations and distributed resources will be demonstrated and tested.

Task 17.1 – Develop Integrated System Operation Test Plan

Task 17.2 – Conduct Integrated System Operational Test

Task 17.3 – Field Demonstration of the Integrated SmartGrid and DR/DER Functionality.

Task 17.4 – Field Demonstration of the Integrated SmartGrid and 'First Responder' Functionality

Task 17.5 – Integrated System Testing & Field Demonstration Report

Task 18.0 - Operate Integrated Solution

The Recipient will commence the daily operation of the SmartGrid demonstration system for the 24 month data collection period.

Task 18.1 – Operate System According to Program Plan & Procedures

Task 18.2 – Document any Grid Operational Issues and Resolutions

Task 18.3 – Document any DER Operational Issues and Resolutions

Task 18.4 – Produce an Operations Issues and Resolutions Report

Task 19.0 – Program Data Collection

In this task, 24 months of performance and consumption data will be collected, compiled and analyzed for the project area. This data will be compared against the baseline data to measure the

impact on grid performance, system efficiencies, and end-use consumption patterns achieved by the demonstrated technologies. The Recipient will submit this data to the SmartGrid Information Clearinghouse (SGIC) in the form, format, and frequency required.

Task 19.1 – Collect Program Performance & Consumption Data

Task 19.2 – Compile & Manage Program Data

Task 19.3 – Analysis of Program Data

Task 19.4 – Deliver Program Data to SGIC

Task 19.5 – Data Collection Summary Report

Task 20.0 – Project Completion and Final DOE Reporting

Task 20.1 – Final Technology Performance Reports – The final TPR will be due 60 days prior to project expiration to allow sufficient time for the recipient to incorporate DOE comments.

Task 20.2 - Interoperability and Cyber Security (I&CS) Assessment Report -

Task 20.3 - Final Technical Report – A comprehensive examination of project performance, results, and accomplishments that specifically shall include: 1) a summary of the final Technology Performance Report(s) for the project, 2) a summary of the final Interoperability and Cyber Security Assessment, and 3) a Lessons Learned Report.

D. Deliverables

The specific content of the following topical plans/reports and final report shall be developed in accordance with the “Instructions for Preparation of Deliverables” document, Appendix 1 to this Statement of Project Objectives.

Deliverable Task 1 - Project Management Plan (PMP) Update -Due 30 days after award of the definitized agreement.

Deliverable Task 3 - Interoperability and Cyber Security (I&CS) Plan - Due 30 days after award of the definitized agreement.

Deliverable Task 4 - Metrics and Benefits Reporting Plan – Due 90 days after award of the definitized agreement.

Deliverable Task 5.2 - Semi-Annual Project Review Meetings

Deliverable Task 5.3 - Semi-Annual Project Management Plan Updates

Deliverable Task 5.4 - DOE Peer and Reasonableness Reviews

Deliverable Task 5.6 – Periodic Technology Performance Reporting - Interim Technology Performance Reports (TPRs) will be provided on a frequency specified in the approved Metrics and Benefits Reporting Plan

Deliverable Task 5.9 - Final Project Reporting

Deliverable Task 6.2 – Develop Public Outreach and Education Plan

Deliverable Task 6.6 – Public Outreach and Education Implementation Report

Deliverable Task 7.7 - Project Integration Architecture & Design Document

Deliverable Task 7.8 – Data and Technology Plan Review

Deliverable Task 8.6 – SmartMetering Implementation Report

Deliverable Task 9.6 - Baseline Data Collection Report

Deliverable Task 10.9 - SmartSubstation Implementation Report

Deliverable Task 12.16 – SmartDistribution DMS Implementation Report

Deliverable Task 13.7 – SmartDistribution 'FirstResponder' Implementation Report

Deliverable Task 14.12 - SmartEnd-Use Implementation Report

Deliverable Task 15.6 - SmartGeneration Report

Deliverable Task 16.8 - Smart DER/DR Implementation Report

Deliverable Task 17.5 - Integrated System Testing & Field Demonstration Report

Deliverable Task 18.4 - Operations Issues and Resolutions Report

Deliverable Task 19.5 - Data Collection Summary Report

Deliverable Task 20.1 – Final Technology Performance Reports – The final TPR will be due 60 days prior to project expiration to allow sufficient time for the recipient to incorporate DOE comments.

Deliverable Task 20.2 - Interoperability and Cyber Security (I&CS) Assessment Report - Due 60 days prior to project expiration to allow sufficient time for the recipient to incorporate DOE comments.

Deliverable Task 20.3 - Final Technical Report – A comprehensive examination of project performance, results, and accomplishments that specifically shall include: 1) a summary of the final Technology Performance Report(s) for the project, 2) a summary of the final Interoperability and Cyber Security Assessment, and 3) a Lessons Learned Report. Due 90 days after expiration or termination of the award.

E. REPORTING, BRIEFINGS AND TECHNICAL PRESENTATIONS

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist. Further, deliverables (as listed above under Section D) will closely track the purpose, approach, and expected outcomes of each task.

Requirements for periodic briefings and technical presentations will be specified by the DOE Project Officer and may include all or a combination of some of the following:

- Annual detailed briefing to the Project Officer at the Project Officer's facility located in Pittsburgh, PA; Morgantown, WV; or Washington, DC, to explain the plans, progress and results of the technical effort. The first briefing (kick-off meeting) will be presented within 30 days of the effective date of the Award. A final briefing will be presented at least 30 days prior to expiration of the Award.
- Technical paper(s) at the DOE Annual Review Meeting to be held at either the NETL facility located in Pittsburgh, PA or Morgantown, WV; or other location specified by the DOE Project Officer.
- Technical paper(s) at the DOE Peer Review Meeting to be held at either the NETL facility located in Pittsburgh, PA or Morgantown, WV; or other location specified by the DOE Project Officer.
- Additional briefings will be required for periodic site visits/inspections.

An electronic copy of all briefing/presentation materials shall be provided to the Project Officer prior to the event date.

Appendix 1
to the Statement of Project Objectives (SOPO)

***INSTRUCTIONS FOR
PREPARATION
OF DELIVERABLES***

for Cooperative Agreements under the SMART GRID
DEMONSTRATION PROGRAM

May 27, 2010

U.S. Department of Energy
National Energy Technology Laboratory
Project Management Center

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I. Introduction

This document provides instructions and comprehensive guidance for preparation of the required deliverables for cooperative agreement awards under the Smart Grid Demonstration Program (SGDP). **A summary table of deliverables with due dates is provided in the Attachment .**

DOE seeks to work in partnership with the recipients of SGDP Cooperative Agreement awards to determine which information requests are directly applicable to their project and how best to gather and report this information so that project planning, execution, and results can be effectively communicated. DOE realizes that the projects in this program are distinct, such that a one-size-fits-all approach to reporting is not realistic. Therefore, Recipients should tailor each deliverable to meet the specific nature of their project. If an element (e.g., section, topic, or aspect) of a deliverable is applicable, then it should be comprehensively addressed. Elements that do not apply can be omitted.

II. Project Management Plan (PMP)

The PMP shall incorporate, at a minimum, sections A – L described below. The PMP shall be updated subsequently with any major/significant project revisions.

A. Executive Summary

B. Risk Management

The discussion of risk management should identify and manage those events that could threaten the project's success. The identification, evaluation, associated handling strategy or action, and ultimate disposition of each risk should be documented. At a minimum, the risk management section should include the following for each risk identified:

- Recipient assigned identification number for the risk. Risk IDs should be unique. They will be used by DOE to track risks across monthly submissions and to provide a unique reference for referring to risks in communications
- Short title for the risk.
- Detailed description of the risk
- The likelihood that the risk is realized – becomes an issue, where high is the most likely and low is the least.
- The impact that the realized risk (issue) would have on either cost or schedule, where high is the most impact and low is the least.
- Text description of the potential results if the risk is realized.
- How the project plans to handle the risk. Accept means that no additional actions will be taken to prevent the risk. Avoid means that the project will avoid the circumstances that would bring the risk to realization. Mitigate means that the project will take specific actions to mitigate either the likelihood or the impact of the risk or both.
- Details of the actions that are planned to mitigate the risk. Mitigation strategies should include associated costs if any.
- Additional comments related to the risk. This field may be used to update the risk status, comment on progress of the mitigations or changes in likelihood or impact or provide additional relevant information.

C. Organizational Breakdown Structure

D. Work Breakdown Structure

E. Milestone Log

F. Funding and Costing Profile

G. Project Timeline

H. Success Criteria at Decision Points

I. Resource Loaded Schedule (RLS)

The RLS is a schedule timeline of the project broken down by Phase and incorporates (is consistent with) the work breakdown structure, and funding and costing profile. The timeline should also show any interdependencies and note the Project milestones. It is highly recommended that the Recipient consider using a commercial software package (e.g., Microsoft Project) to generate the timeline as a Gantt chart or other applicable format.

J. Communications

The appropriate exchange of project information within the Project Management Team, internal organizational elements and to external stakeholders should be established. Some elements that should be considered are: (a) routine Project meetings (e.g., face-to-face, and remote conferencing); (b) design reviews; (c) Government review and approval of Recipient press releases, conference papers and journal articles; (d) dissemination of Project documentation (e.g., engineering drawings, modeling results, equipment lists, test plans, etc.); and (e) briefings to the Government.

K. Project Monitoring, Change Control and Process Improvement

The PMP should clearly show how: (a) the Project will be monitored and changes controlled relative to the technical scope, budget and schedule basis, including changes that affect the Project Management Plan and the financial assistance award instrument; (b) Project Value Management System data including variances will be determined, evaluated, and reported in accordance with the guidance provided below; (c) steps will be taken to mitigate problems; and, (d) all these processes will be reported. The Recipient shall implement these monitoring, change control and process improvement processes to revise and update the PMP when changes: (a) to Project management policies and procedures are appropriate; (b) to the technical scope, budget and/or schedule basis are approved; or, (c) are otherwise required to ensure that it is the appropriate governing plan for the work required to accomplish Project objectives.

Project Value Management System (PVMS) Reporting Guidance

An Earned Value Management System (EVMS) is a technique for measuring project progress by combining measurement of scope, schedule, and cost into a single, integrated system. An EVMS measures actual performance of work scope and associated cost and schedule versus an agreed to baseline. Content and scope of WBS for EVMS will vary by nature of work.

DOE is adopting some of the concepts and terminology of an EVMS and using the term of Project Value Management System (PVMS) for smart grid projects.

The monthly reporting of the PVMS data in the following table will be required in the Monthly Progress Reports. PVMS provides cost and schedule performance metrics that report progress against a project's baseline. The purpose of the PVMS is to allow Project personnel and DOE to monitor progress, identify significant issues, and implement corrective action as early as possible.

Field		Definition/Metrics
AC	Actual Cost	The cost actually incurred for the work accomplished during the month.
EV	Earned Value	Sum of all budgets for all completed work and the completed portions of ongoing work. Total budget for the scope that was actually accomplished during the month.
PV	Planned Value	Planned accomplishment established in performance measurement baseline.
ETC	Estimate to Complete	Current estimate for the remaining project scope. This is the estimate for all remaining work excluding contingencies.
BAC	Budget at Completion	Sum of all budgets allocated to a project excluding management reserve.
CV	Cost Variance	= EV-AC. The difference between the estimated cost of work performed and actual cost of work performed. CV>0, costing more to accomplish than budgeted. CV<0, costing less to accomplish than budgeted.
SV	Schedule Variance	= EV-PV. Difference between actual completion of work and the scheduled completion of work. When SV>0, project is ahead of schedule. When SV<0, project is behind schedule.
CPI	Cost Performance Index	= EV/AC. Ratio of budgeted costs to actual costs for progress reported during the current month.
SPI	Schedule Performance Index	= EV/PV. Ratio of physical work performed to the baseline schedule.
SCI	Schedule times Cost Index	Product of SPI and CPI. Measures combined deviation from cost and schedule baselines.
Variance Analysis		Written Explanation will be required if CPI or SPI <0.8 or >1.2

L. Property Management

The PMP will include table that includes, at a minimum, item description, number of items, expected vendors for, anticipated costs of, and approximate order and receipt date of all property to be purchased for the project. Related incidental items may be grouped into a single line item as necessary.

III. Interoperability and Cyber Security (I&CS) Plan

The Recipient shall develop an Interoperability and Cyber Security Plan as detailed below. The Recipient will update the I&CS Plan as any major/significant project revisions arise.

The interoperability portion of the I&CS Plan should, at a minimum, include the following:

- A summary of the information exchange interfaces for communicating automation devices and systems (i.e., their points of connection with other elements of the system)
- A summary of how the project will provide openly available and proprietary aspects of the interface specifications, and how existing (legacy) communicating devices or systems will be integrated into the project
- A summary of how the project will address response to failure and device upgrade scenarios, such that overall system impact is mitigated
- A summary of how the project will support compatibility with NIST's emerging smart grid framework for standards and protocols
- In addition, the Recipient, should further detail:
 - The information exchange interface points for each type of communicating automation device and system.
 - The openly-available and proprietary aspects of the interface specifications.
 - Where a type of communicating device or system is expected in large numbers (e.g., meters, sensors, customer interfaces), the extent of support for multiple suppliers who will integrate their devices or systems that may be based on different technologies at the points of interface.
 - If existing (legacy) communicating devices or systems are integrated into the project, the extent to which they integrate and interoperate at the points of interface with new components.
 - The interacting parties' anticipated response to failure scenarios, particularly loss of communications, such that overall system impact is mitigated in the event of such failure.
 - The anticipated process for upgrading devices or systems (hardware and software) so that overall system operation impact is mitigated.
 - The evidence that will be provided (interface specifications, interoperability test plans and results, reviews, and other engineering artifacts) to ensure interoperability at the interfaces of communicating automation devices and systems.
 - The project's ability to support compatibility with NIST's emerging smart grid framework for standards and protocols as information becomes available.

The Recipient shall address cyber security in every phase of the engineering lifecycle of the project, including design and procurement, installation and commissioning, and the ability to provide ongoing maintenance and support. Cyber security solutions should be comprehensive and capable of being extended or upgraded in response to changes to the threat or technological environment. The cyber security portion of the I&CS Plan should, at a minimum, include the following:

- A summary of the cyber security risks and how they will be mitigated at each stage of the lifecycle (focusing on vulnerabilities and impact)
- A summary of the cyber security criteria utilized for vendor and device selection
- A summary of the relevant cyber security standards and/or best practices that will be followed
- A summary of how the project will support emerging smart grid cyber security standards
- In addition, the Recipient should further detail:
 - The methodology used to identify cyber security risks and the results of this assessment (e.g., the assessment should consider the mission of the new smart grid project and also potential impacts to other critical grid control functions to which they are connected).
 - How cyber security risks will be mitigated at each phase of the engineering lifecycle, including policy, procedural, and technical (logical and physical) controls, with special emphasis on strategies for:
 - ensuring the confidentiality, integrity, and availability of device and system data and communications commensurate with the application requirements,
 - securing, logging, monitoring, alarming, and notification, and
 - applications where logical and physical security may not be under the direct jurisdiction of the installing entity.
 - The relevant cyber security standards or best practices that will be used.
 - The capability of the components or system to be updated to meet future cyber security requirements or technologies.
 - How evidence will be provided (e.g., a test plan, engineering artifacts, independent testing and review) to demonstrate and validate the effectiveness of the cyber security controls.

The DOE maintains a website that provides guidance on cyber security program elements and other resource and reference material. The address is: <https://www.arrasmartgridcyber.net/index.php>. Recipients may find this website useful in preparing their cyber security plans and developing their cyber security program for these smart grid projects.

IV. Metrics and Benefits Reporting Plan

A. Introduction

The Metrics and Benefits Reporting Plan will contain information to be used by DOE to assess smart grid technologies demonstrated by the SGDP program. Metrics are divided into two main categories: build metrics and impact metrics. **Build metrics** refer to the monetary investments, electricity infrastructure assets, policies and programs, marketplace innovation and jobs that are part of smart grid projects. **Impact metrics** refer to smart grid capabilities enabled by projects and the measurable impacts of smart grid projects that deliver value. More information on the types of metrics and benefits DOE is interested in examining are provided in the “Guidebook for ARRA Smart Grid Program Metrics and Benefits” (SG Guidebook), dated December 7, 2009.

[http://www.oe.energy.gov/DocumentsandMedia/09_SG_Kickoff_Guidebook.pdf]

Recipients are encouraged to work collaboratively with DOE to seek guidance and clarification regarding questions in completing their Metrics and Benefits Reporting Plan.

B. Metrics and Benefits Reporting Plan Content

The Recipient shall develop and implement a plan for the collection and reporting of project-related metrics and benefits. The Metrics and Benefits Plan shall include at a minimum the following information:

- Discussion of Project Metrics and Benefits:
 - A discussion of the objectives of the demonstration project.
 - The Build Metrics section of the plan should address the following content:
 - A listing, description, and costs related to the **build metrics** associated with the project. The metrics will apply to the total project supported both by DOE and Recipient’s cost-shared funds. These metrics are described in more detail in Appendix A of the SG Guidebook.
 - A discussion of assets that will be deployed permanently, versus those that will be installed only for the duration of the demonstration.
 - A discussion of grid functionality and benefit streams anticipated to be addressed and/or enabled by the demonstration. Describe which functionality will be temporary and which will be permanent as part of the system. (Appendix C of the SG Guidebook correlates the deployment of smart grid assets, with grid functionality and benefits).
 - **Jobs data will be reported as part of the build metrics** (see Section C below). Sufficient information should be provided so that build metrics can be correlated with numbers and types of customers (i.e., residential, commercial, industrial), the extent of service area covered, and how funding is allocated.

- The Technology Performance section of the plan should describe the approach to how the recipient will develop the interim and a final *Technology Performance Reports* (TPRs) which shall document and summarize the status of identification and quantification of impact metrics and cost-benefit data and analyses with respect to the pre-demonstration (baseline) system configuration and the demonstrated system configuration. ***If the project contains more than one distinct technology or groups of technologies, the recipient should prepare a TPR for each.*** This portion of the plan should address the following content, at a minimum:
 - Utility system operational data prior to the installation of the demonstration system is required in order to provide credible baseline data on electrical system performance before and after the installation of the demonstration system. Using a time period of at least six months prior to system commissioning, information concerning load profiles, peaks, overloads, faults, power quality events, and any other information required to fully characterize the operation of the electrical utility at the demonstration site prior to installation of the demonstration system shall be collected by the recipient's team, so that net benefits can be calculated.
 - A description of the types of data to be reported, including their characteristics (e.g., frequency, units), and the calculations used to derive benefits. Assumptions or ranges of input values used should be provided.
 - A description of how project impacts would lead to benefits with recommendations for how benefits would be quantitatively estimated. Impact metrics will be reported only for those aspects of the project that relate to assets deployed permanently providing sustainable system impacts. Experimental aspects of projects will report impacts demonstrated as part of the project test plan and final report. Guidance on impacts and benefits is provided in the SG Guidebook. For Energy Storage (ES) projects, another guidebook specifically addressing metrics and benefits for ES technologies will be released by DOE in the near future. Also, the DOE report titled, "*Energy Storage for the Electricity Grid: Benefits and Market Potential Assessment Guide*" (SAND2010-0815, February 2010) may provide the recipients with useful guidance in this area.
- Implementation and Reporting:
 - Provide a schedule showing when information will be gathered, analyzed and reported including identifying when the technology is deployed and key decision milestones (e.g., approvals by public utility commissions).
 - Present approaches for collaboration between DOE and the Project Team (including representative organizations) to discuss key issues and share valuable information derived from the project.

C. Jobs Data Reporting

This section provides recipients guidance on the internal DOE collection of direct jobs created and retained from Recovery Act funds. ***Reporting of this jobs data is part of the Build Metrics Reporting requirement.*** While the Office of Management and Budget (OMB)

requires Recovery Act recipients to report jobs data to FederalReporting.gov on a quarterly basis, it only requires recipients to report on a subset of jobs created by DOE Recovery Act funds.

In order to capture comprehensive job figures, DOE has additional data collection requirements. These data will better enable the Department to track the number of actual jobs created under the Recovery Act and transparently show the American public how Recovery Act programs are helping create jobs and spur sustainable, economic growth.

Internal DOE job collection differs from FederalReporting.gov in:

- OMB requires recipients of Federal contracts to report jobs created by prime entities only. DOE Jobs Reporting requires recipients to report jobs created at both the prime recipient/contractor and sub-recipient/subcontractor level.
- DOE Jobs Reporting aims to monitor jobs created directly from DOE Recovery Act funds and non-federal funds. Recipients will report data on jobs created from non-federal funds cost-share portion of project.
- DOE Jobs Reporting provides a breakdown of jobs within the categories identified below:
 - Managers
 - Engineers
 - Computer-related Occupations
 - Environmental and Social Scientists
 - Construction, Electrical and Other Trades
 - Analysts,
 - Business Occupations
 - Recording,
 - Scheduling, Computer Operator Occupations

Job numbers reported to DOE will encompass all direct jobs created during the reporting timeframe as a result of the Recovery Act funding. Jobs created and retained before receiving Recovery Act funds should not be included. In addition, DOE will allow recipients to report indirect jobs (for definition of 'indirect jobs' see OMB Memo M-09-21, June 22, 2009) created or retained on a voluntary basis.

The DOE will verify job data reported against other reported data from recipients, including invoices and financials. If recipient reported data cannot be verified, then DOE will work with the recipients to resolve job data issues.

The template below allows recipients to report jobs created or retained by reporting the total hours worked for both the federal and cost share portions. The Full-time Equivalents (FTEs)

will be automatically calculated by the template using the DOE formulas discussed later in this section. The Cost Share percentage will also be calculated using the DOE formulas.

	4. Hours worked per ARRA Reporting Period						
	Full Period Ending on the last day of: December-09						
	Total number of Periods used for FTE calculation						
	% Funded by ARRA	Potential Full-time Schedule Hours This Period	Cumulative Hours in Full-time Schedule	Cumulative ARRA Hours	Cumulative ARRA FTEs	Total Headcount	Cumulative Indirect FTEs
		520	520	0.0	0.00	0.00	0
Job Category	Total Potential Hours for this Period	Hours Worked in Period	% Funded by ARRA	ARRA Hours Worked in Period	ARRA FTEs This Period	Total Headcount This Period	Indirect Hours This Period
Managers	520		0.00%	0.0	0.00		
Engineers	520		0.00%	0.0	0.00		
Computer-related Occupations	520		0.00%	0.0	0.00		
Environmental and Social Sciences	520		0.00%	0.0	0.00		
Construction, Electrical, and other Trades	520		0.00%	0.0	0.00		
Analysts	520		0.00%	0.0	0.00		
Business Occupations	520		0.00%	0.0	0.00		
Recording, Scheduling, Computer Operator	520		0.00%	0.0	0.00		
TOTAL	520	0		0.0	0.00	0.00	0

DOE Jobs Calculations

The jobs reported to DOE program offices should be expressed in OMB's measurement of quarterly FTEs. The important difference is that total hours worked should include jobs at both the prime contractor/recipient and sub-contractor and sub-recipient level. Furthermore, recipients should also include the cost-share portion of the project and the number of direct jobs created for the entire project.

DOE has identified formulas for calculating FTEs, both from the Federal portion and from the entire project, and for calculating the cost share percentage for the project. These formulas are listed below:

FTEs from Federal Recovery Funds:

$$\text{DOE funded FTE} = \frac{\text{Total hours worked in Jobs Created from DOE Recovery Act funds}}{\text{Number of Hours in Sector Specific Full-time Schedule}}$$

Total FTEs (from federal + non-federal funds) from Recovery Act Supported Project:

$$\text{Total FTE} = \frac{\text{Total Hours Worked on Recovery Act-Supported Project}}{\text{Number of Hours in Sector Specific Full-time Schedule}}$$

Cost Share:

$$\text{Cost Share} = \frac{\text{Total Cost of Recovery Act-Supported Project} - \text{DOE Recovery Act funds}}{\text{Total Cost of Recovery Act-Supported Project}}$$

Or in other terms,

$$\text{Cost Share} = \frac{\text{Non-federal Funds invested in Recovery Act- Supported Project}}{\text{Total Cost of Recovery Act -Supported Project}}$$

Example of Job Calculations for DOE:

Assume Recipient is preparing its second report and defines a full time schedule as 2080 hours per year or 520 hours worked per quarter.

DOE Funded Employees	Period 2 (10/1 – 12/31)
Employee 1	520
Employee 2	520
Employee 3	260
Total:	1,300
Full Time schedule per Employee	520
<u>Total DOE funded FTEs:</u> 1300/ 520 = 2.5 JOBS	
Non-Federal Funded Employees	Period 2 (10/1 – 12/31)
Employee 1	520
Employee 2	520
Employee 3	260
Employee 4	52
Total:	1,352
Full Time schedule per Employee	520
<u>Total Non-Federal FTEs:</u> 1,352/ 520 = 2.6	
TOTAL FTEs 2.5 DOE funded FTEs + 2.6 non-Fed funded FTEs) = 5.1	
Total Cumulative Headcount = 7	
3 DOE Funded Headcount + 4 non-Fed funded headcount	

D. Consistency and Data Quality

DOE expects to work collaboratively with the Recipient to develop consistency and quality in the methods used to calculate metrics and benefits, and develop appropriate baselines. It is the Recipient's responsibility to collect and assemble data required to produce the metrics

and benefits. In addition, the Recipient shall be available to answer questions DOE may have regarding how the metrics and benefits were developed.

V. Interim and Final *Technology Performance Reports* (TPRs)

The Recipient shall submit interim and a final *Technology Performance Reports* (TPRs) which shall document and summarize the status of identification and quantification of impact metrics and cost-benefit data and analyses with respect to the pre-demonstration (baseline) system configuration and the demonstrated system configuration, as applicable. *Impact metrics* refer to smart grid capabilities enabled by projects and the measurable impacts of smart grid projects that deliver technical and economic value. ***There may be projects that contain more than one distinct technology (or groups of technologies). In these cases, the recipient should prepare a TPR for each technology, so that the benefits of each can be individually assessed and compared against other competing technologies.***

The interim TPRs will serve as a basis for the recipient and DOE to collaborate on validating that the proposed metrics are optimal for fully characterizing the technical and economic performance of the system (e.g., electrical grid) both before and after deployment of the technologies to be demonstrated.

The final TPR(s) will serve as the final documentation of the technical, economic, and societal benefits (both qualitative and quantitative) of the demonstrated technology(s) within a consistent framework across all smart grid demonstration projects. This report will be made available to the public as a means to disseminate the information related to performance of the technology.

VI. Interoperability and Cyber Security (I&CS) Assessment Report

The Recipient shall submit an Interoperability and Cyber Security (I&CS) Assessment Report which shall document and summarize all of I&CS-related work performed during the award period and the associated results in a comprehensive manner. This report shall not merely be a compilation of information contained in previously submitted plans and periodic reports, but shall present that information in an integrated, stand-alone fashion. It must address all activities and topics that were discussed in the latest I&CS Plan.

The interoperability portion of the I&CS report should, at a minimum, include the following:

- A summary of the information exchange interfaces for communicating automation devices and systems (i.e., their points of connection with other elements of the system)
- A summary of how the project provided openly available and proprietary aspects of the interface specifications, and how existing (legacy) communicating devices or systems were integrated into the project
- A summary of how the project addressed response to failure and device upgrade scenarios, such that overall system impact was mitigated
- A summary of how the project supported compatibility with NIST's emerging smart grid framework for standards and protocols
- In addition, the Recipient, should further detail:
 - The information exchange interface points for each type of communicating automation device and system.
 - The openly-available and proprietary aspects of the interface specifications.
 - Where a type of communicating device or system was used in large numbers (e.g., meters, sensors, customer interfaces), the extent of support for multiple suppliers who integrated their devices or systems that were based on different technologies at the points of interface.
 - If existing (legacy) communicating devices or systems were integrated into the project, the extent to which they integrated and interoperated at the points of interface with new components.
 - The interacting parties' response to actual or simulated failures, particularly loss of communications, such that overall system impact was mitigated.
 - The process that was used for upgrading devices or systems (hardware and software) so that overall system operation impact was mitigated.
 - The evidence (interface specifications, interoperability test plans and results, reviews, and other engineering artifacts) that interoperability at the interfaces of communicating automation devices and systems was achieved.
 - The project's experience with supporting conformance with NIST's emerging smart grid framework for standards and protocols.

The cyber security portion of the I&CS report should, at a minimum, include the following:

- A summary of the cyber security risks and how they were mitigated at each stage of the project (focusing on vulnerabilities and impact)
- A summary of the cyber security criteria which were utilized for vendor and device selection
- A summary of the relevant cyber security standards and/or best practices that were followed
- A summary of how the project supported emerging smart grid cyber security standards
- In addition, the Recipient should further detail:
 - The methodology used to identify cyber security risks and the results of this assessment (e.g., the assessment should consider the mission of the new smart grid project and also potential impacts to other critical grid control functions to which they are connected).
 - How cyber security risks were mitigated at each phase of the engineering lifecycle, including policy, procedural, and technical (logical and physical) controls, with special emphasis on strategies that were used for:
 - ensuring the confidentiality, integrity, and availability of device and system data and communications commensurate with the application requirements,
 - securing, logging, monitoring, alarming, and notification, and
 - applications where logical and physical security were not under the direct jurisdiction of the installing entity.
 - The capability of the components or system to be updated to meet future cyber security requirements or technologies.
 - Evidence (e.g., a test plan, engineering artifacts, independent testing and review) of demonstrated and validated effectiveness of the cyber security controls.

VII. Final Technical Report

The Recipient shall submit a *Final Technical Report* which shall document and summarize all work performed during the award period in a comprehensive manner. This report shall not merely be a compilation of information contained in previously submitted quarterly reports, but shall present that information in an integrated fashion. It must contain a discussion of how this project has: reduced system demands and costs; increased energy efficiency; optimally allocated and matched demand and resources to meet that demand; and increased the reliability of the grid. In addition, it must discuss how the project has addressed the societal benefits of a smart grid which are reduced emissions, lower costs, increased reliability, greater security and flexibility to accommodate new energy technologies, including renewable, intermittent and distributed sources.

This report shall include, at a minimum:

- Overview of the project, including its objectives;
- A presentation of the final build metrics and accounting of the costs associated with the project;
- A discussion of the technical and economic performance of the technology with supporting calculations. For smart grid technology, this may apply to improvements in grid operations and cost savings (refer to impact metrics discussion in the Guidebook). For energy storage projects, this will apply to the capital and operations costs of the technology, as well as how well it performed with respect to meeting technical and cost performance expectations. For all projects, this will include:
 - A discussion of grid functionality and benefit streams that were anticipated and enabled by the demonstration;
 - A presentation of impact metrics for assets that will be deployed as permanent part of the utility system;
- A summary of the interoperability and cyber security effort performed during the award period and the associated results;
- A comprehensive, and in-depth discussion of lessons learned, and how they could be applied to improve the overall cost/benefit relationship.

The *Final Technical Report* will be made available to the public; confidential information should not be included.

ATTACHMENT A

SGDP Recipient Deliverable Summary and Due Dates

Award Agreement Deliverables	Due Date Requirement	Example – If definitized award date is March 1, 2010, due date is:	Submit materials to:
Project Management Plan	30 calendar days after the date of definitized award date.	March 30, 2010	https://www.eere-pmc.energy.gov/SubmitReports.aspx
Interoperability and Cyber Security (I&CS) Plan	30 calendar days after the date of definitized award date.	March 30, 2010	https://www.eere-pmc.energy.gov/SubmitReports.aspx
Metrics and Benefits Reporting Plan	90 calendar days after the date of definitized award date.	May 28, 2010	https://www.eere-pmc.energy.gov/SubmitReports.aspx
Interoperability and Cyber Security (I&CS) Assessment Report	60 calendar days prior to project expiration.		https://www.eere-pmc.energy.gov/SubmitReports.aspx
Technology Performance Reports (Interim)	Provided on frequency specified in the approved Metrics and Benefits Reporting Plan		https://www.eere-pmc.energy.gov/SubmitReports.aspx
Technology Performance Report(s) (Final)	60 calendar days prior to project expiration.		https://www.eere-pmc.energy.gov/SubmitReports.aspx
Final Technical Report	90 calendar days after project expiration.		http://www.osti.gov/mlink-2413

ATTACHMENT 3

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

1. Identification Number: DE-OE0000221 Amendment 001		2. Program/Project Title: RECOVERY ACT - KCPL's Green Impact Zone SmartGrid Demonstration														
3. Recipient: Kansas City Power & Light																
4. Reporting Requirements: A. MANAGEMENT REPORTING <input checked="" type="checkbox"/> Progress Report <input checked="" type="checkbox"/> Special Status Report		Frequency M A	No. of Copies Upload only 1 copy to the address in the next column at the interval specified in the previous column.	Addressees https://www.eere-pmc.energy.gov/SubmitReports.aspx https://www.eere-pmc.energy.gov/SubmitReports.aspx												
B. SCIENTIFIC/TECHNICAL REPORTING (Reports/Products must be submitted with appropriate DOE F 241. The 241 forms are available at www.osti.gov/elink) <table style="width: 100%;"> <tr> <td style="width: 30%;">Report/Product</td> <td style="width: 30%;">Form</td> <td style="width: 40%;"></td> </tr> <tr> <td><input checked="" type="checkbox"/> Final Scientific/Technical Report**</td> <td>DOE F 241.3</td> <td rowspan="4" style="text-align: center; vertical-align: middle;"> F A </td> </tr> <tr> <td><input checked="" type="checkbox"/> Conference papers/proceedings*</td> <td>DOE F 241.3</td> </tr> <tr> <td><input type="checkbox"/> Software/Manual</td> <td>DOE F 241.4</td> </tr> <tr> <td><input type="checkbox"/> Other (see Special Instructions)</td> <td>DOE F 241.3</td> </tr> </table> <i>* Scientific and technical conferences only</i>		Report/Product	Form		<input checked="" type="checkbox"/> Final Scientific/Technical Report**	DOE F 241.3	F A	<input checked="" type="checkbox"/> Conference papers/proceedings*	DOE F 241.3	<input type="checkbox"/> Software/Manual	DOE F 241.4	<input type="checkbox"/> Other (see Special Instructions)	DOE F 241.3	http://www.osti.gov/elink-2413 http://www.osti.gov/elink-2413		
Report/Product	Form															
<input checked="" type="checkbox"/> Final Scientific/Technical Report**	DOE F 241.3	F A														
<input checked="" type="checkbox"/> Conference papers/proceedings*	DOE F 241.3															
<input type="checkbox"/> Software/Manual	DOE F 241.4															
<input type="checkbox"/> Other (see Special Instructions)	DOE F 241.3															
C. FINANCIAL REPORTING <input checked="" type="checkbox"/> SF-425, Federal Financial Report		Q, F https://www.eere-pmc.energy.gov/SubmitReports.aspx														
D. CLOSEOUT REPORTING <input checked="" type="checkbox"/> Patent Certification <input checked="" type="checkbox"/> Property Certification <input type="checkbox"/> Other (see Special Instructions)		F F https://www.eere-pmc.energy.gov/SubmitReports.aspx														
E. OTHER REPORTING <input checked="" type="checkbox"/> Annual Indirect Cost Proposal <input checked="" type="checkbox"/> Annual Inventory Report of Federally Owned Property, if any <input checked="" type="checkbox"/> Other - Project Management Plan** <input checked="" type="checkbox"/> Other - Interoperability and Cyber Security (I&CS) Plan** <input checked="" type="checkbox"/> Other - Metrics and Benefits Reporting Plan** <input checked="" type="checkbox"/> Other - Build Metrics Reports** <input checked="" type="checkbox"/> Other - Technology Performance Reports** <input checked="" type="checkbox"/> Other - Interoperability and Cyber Security (I&CS) Assessment Report**		A A A A A Q A A			Annual Indirect Cost Proposal: See Text All Other Reports in Section E: https://www.eere-pmc.energy.gov/SubmitReports.aspx											
F. AMERICAN RECOVERY AND REINVESTMENT ACT REPORTING <input checked="" type="checkbox"/> Reporting and Registration Requirements		D http://www.federalreporting.gov														
FREQUENCY CODES AND DUE DATES: <table style="width: 100%;"> <tr> <td style="width: 50%;"> A - Within 5 calendar days after events or as specified. F - Final; 90 calendar days after expiration or termination of the award. Y - Yearly; 90 days after the end of the reporting period. </td> <td style="width: 50%;"> S - Semiannually; within 30 days after end of reporting period. M - Monthly; within 15 days after end of the reporting period. Q - Quarterly; within 30 days after end of the reporting period. D - Quarterly; within 10 days after end of the reporting period. </td> </tr> </table>					A - Within 5 calendar days after events or as specified. F - Final; 90 calendar days after expiration or termination of the award. Y - Yearly; 90 days after the end of the reporting period.	S - Semiannually; within 30 days after end of reporting period. M - Monthly; within 15 days after end of the reporting period. Q - Quarterly; within 30 days after end of the reporting period. D - Quarterly; within 10 days after end of the reporting period.										
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5. Special Instructions: Forms are available at https://www.eere-pmc.energy.gov/forms.aspx .																
**Please reference the "Instructions for Preparation of Deliverables" document, Appendix 1 to the Statement of Project Objectives for this award, for specific information related to the content and submission of these reports.																

Federal Assistance Reporting Instructions (9/09)

A. MANAGEMENT REPORTING

Progress Report

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

1. The DOE award number and name of the recipient.
2. The project title and name of the project director/principal investigator.
3. Date of report and period covered by the report.
4. A comparison of the actual accomplishments with the goals and objectives established for the period and reasons why the established goals were not met.
5. A discussion of what was accomplished under these goals during this reporting period, including major activities, significant results, major findings or conclusions, key outcomes or other achievements. This section should not contain any proprietary data or other information not subject to public release. If such information is important to reporting progress, do not include the information, but include a note in the report advising the reader to contact the Principal Investigator or the Project Director for further information.
6. Cost Status. Show approved budget by budget period and actual costs incurred. If cost sharing is required break out by DOE share, recipient share, and total costs.
7. Schedule Status. List milestones, anticipated completion dates and actual completion dates. If you submitted a project management plan with your application, you must use this plan to report schedule and budget variance. You may use your own project management system to provide this information.
8. Project Value Management System (PVMS) data reporting in accordance with the approved PMP. Refer to the "Instructions for Preparation of Deliverables" document, Appendix 1 to the Statement of Project Objectives for a list of the required PVMS data fields.
9. Any changes in approach or aims and reasons for change. Remember significant changes to the objectives and scope require prior approval by the contracting officer.
10. Actual or anticipated problems or delays and actions taken or planned to resolve them.

11. Any absence or changes of key personnel or changes in consortium/teaming arrangement.
12. A description of any product produced or technology transfer activities accomplished during this reporting period, such as:
 - A. Publications (list journal name, volume, issue); conference papers; or other public releases of results. Attach or send copies of public releases to the DOE Program Manager identified in Block 15 of the Assistance Agreement Cover Page.
 - B. Web site or other Internet sites that reflect the results of this project.
 - C. Networks or collaborations fostered.
 - D. Technologies/Techniques.
 - E. Inventions/Patent Applications
 - F. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.

Special Status Report

The recipient must report the following events by e-mail as soon as possible after they occur:

1. Developments that have a significant favorable impact on the project.
2. Problems, delays, or adverse conditions which materially impair the recipient's ability to meet the objectives of the award or which may require DOE to respond to questions relating to such events from the public. The recipient must report any of the following incidents and include the anticipated impact and remedial action to be taken to correct or resolve the problem/condition:
 - a. Any single fatality or injuries requiring hospitalization of five or more individuals.
 - b. Any significant environmental permit violation.
 - c. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes.
 - d. Any incident which causes a significant process or hazard control system failure.
 - e. Any event which is anticipated to cause a significant schedule slippage or cost increase.

- f. Any damage to Government-owned equipment in excess of \$50,000.
- g. Any other incident that has the potential for high visibility in the media.

B. SCIENTIFIC/TECHNICAL REPORTS

Final Scientific/Technical Report

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

1. Identify the DOE award number; name of recipient; project title; name of project director/principal investigator; and consortium/teaming members.
2. Display prominently on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data. Reports delivered without such notices may be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports.
3. Provide an executive summary, which includes a discussion of 1) how the research adds to the understanding of the area investigated; 2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or 3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.
4. Provide a comparison of the actual accomplishments with the goals and objectives of the project.
5. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.
6. Identify products developed under the award and technology transfer activities, such as:
 - a. Publications (list journal name, volume, issue), conference papers, or other public releases of results. If not provided previously, attach or send copies of any public releases to the DOE Program Manager identified in Block 15 of the Assistance Agreement Cover Page;
 - b. Web site or other Internet sites that reflect the results of this project;
 - c. Networks or collaborations fostered;

- d. Technologies/Techniques;
 - e. Inventions/Patent Applications, licensing agreements; and
 - f. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.
7. For projects involving computer modeling, provide the following information with the final report:
- a. Model description, key assumptions, version, source and intended use;
 - b. Performance criteria for the model related to the intended use;
 - c. Test results to demonstrate the model performance criteria were met (e.g., code verification/validation, sensitivity analyses, history matching with lab or field data, as appropriate);
 - d. Theory behind the model, expressed in non-mathematical terms;
 - e. Mathematics to be used, including formulas and calculation methods;
 - f. Whether or not the theory and mathematical algorithms were peer reviewed, and, if so, include a summary of theoretical strengths and weaknesses;
 - g. Hardware requirements; and
 - h. Documentation (e.g., users guide, model code).

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

Electronic Format. Reports must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. Materials, such as prints, videos, and books, that are essential to the report but cannot be submitted electronically, should be sent to the Contracting Officer at the address listed in Block 16 of the Assistance Agreement Cover Page.

Submittal Form. The report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)." You can complete, upload, and submit the DOE F.241.3 online via E-Link. You are encouraged not to submit patentable material or protected data in these reports, but if there is such material or data in the report, you must: (1) clearly identify patentable or protected data on each page of the report; (2) identify such material on the cover of the report; and (3) mark the appropriate block in Section K of the DOE F 241.3. Reports must not contain any limited rights data (proprietary data),

classified information, information subject to export control classification, or other information not subject to release. Protected data is specific technical data, first produced in the performance of the award that is protected from public release for a period of time by the terms of the award agreement.

Conference Papers/Proceedings

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

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

Electronic Format. Conference papers/proceedings must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. If the proceedings cannot be submitted electronically, they should be sent to the DOE Administrator at the address listed in Block 16 of the Assistance Agreement Cover Page.

Submittal Form. Scientific/technical conference papers/proceedings must be accompanied by a completed DOE Form 241.3. The form and instructions are available on E-Link at <http://www.osti.gov/mlink-2413>. This form is not required for non-scientific or non-technical conference papers or proceedings.

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

C. FINANCIAL REPORTING

Recipients must complete the SF-425 as identified on the Reporting Checklist in accordance with the report instructions. A fillable version of the form is available at http://www.whitehouse.gov/omb/grants/grants_forms.aspx.

D. CLOSEOUT REPORTS

Final Invention and Patent Report

The recipient must provide a DOE Form 2050.11, "PATENT CERTIFICATION."
This form is available at
http://management.energy.gov/business_doe/business_forms.htm

Property Certification

The recipient must provide the Property Certification, including the required inventories of non-exempt property, located at
<http://www.management.energy.gov/documents/PropertyCertFINAL.doc>

E. OTHER REPORTING

Annual Indirect Cost Proposal and Reconciliation

Requirement. In accordance with the applicable cost principles, the recipient must submit an annual indirect cost proposal, reconciled to its financial statements, within six months after the close of the fiscal year, unless the award is based on a predetermined or fixed indirect rate(s), or a fixed amount for indirect or facilities and administration (F&A) costs.

Cognizant Agency. The recipient must submit its annual indirect cost proposal directly to the cognizant agency for negotiating and approving indirect costs. If the DOE awarding office is the cognizant agency, submit the annual indirect cost proposal to the URL listed on the Reporting Checklist.

Annual Inventory of Federally Owned Property

Requirement. If at any time during the award the recipient is provided Government-furnished property or acquires property with project funds and the award specifies that the property vests in the Federal Government (i.e. federally owned property), the recipient must submit an annual inventory of this property to the URL listed on the Reporting Checklist no later than October 30th of each calendar year, to cover an annual reporting period ending on the preceding September 30th.

Content of Inventory. The inventory must include a description of the property, tag number, acquisition date, location of property, and acquisition cost, if purchased with project funds. The report must list all federally owned property, including property located at subcontractor's facilities or other locations.

Project Management Plan (PMP)

The recipient shall update the PMP that was submitted with their application. The update shall include in changes in approach to executing, monitoring, and controlling the project that have occurred since that time, as well as addressing any DOE comments that were provided as feedback to the initial version of the plan. The first update to the plan is due 30 days after award of the definitized agreement. The plan shall also be updated with any major/significant project

revisions.

Interoperability and Cyber Security (I&CS) Plan

The Recipient shall develop a comprehensive Interoperability and Cyber Security Plan (I&CS Plan) for approval by DOE. The I&CS Plan shall fully describe how the Recipient will address interoperability and cyber security in every phase of the engineering lifecycle of the project, including design, procurement, construction, installation, commissioning, and operation, as well as the ability to provide ongoing maintenance and support. The plan is due 30 days after award of the definitized agreement. The plan shall also be updated with any major/significant project revisions.

Metrics and Benefit Reporting Plan

The Recipient shall submit Metrics and Benefit Reporting Plan that details how project-specific metrics and benefits will be identified, collected, and reported in order to assess smart grid technologies demonstrated by the SGDP program. Metrics are divided into two main categories: build metrics and impact metrics. Build metrics refer to the monetary investments, electricity infrastructure assets, policies and programs, marketplace innovation and jobs that are part of smart grid projects. Impact metrics refer to smart grid capabilities enabled by projects and the measurable impacts of smart grid projects that deliver value, and are reported in Technology Performance Reports (see discussion below). The Recipient is encouraged to work collaboratively with DOE to seek guidance and clarification regarding questions in completing the Metrics and Benefits Reporting Plan. The plan is due 90 days after award of the definitized agreement. The plan shall also be updated with any major/significant project revisions.

Build Metrics Reporting

In accordance with the approved Metrics and Benefits Reporting Plan which recipients prepare and submit in Phase 1 of the project, the recipient shall report build metrics data on a **quarterly** basis. Submissions shall begin the calendar quarter after approval of the Metrics and Reporting Plan. *Build metrics* refer to the monetary investments, electricity infrastructure assets, policies and programs, marketplace innovation and jobs data that are part of smart grid projects.

Technology Performance Reports

In accordance with the approved Metrics and Benefits Reporting Plan which recipients prepare and submit in Phase 1 of the project, the recipient shall submit interim and final *Technology Performance Reports* (TPR) to DOE for review and approval. The frequency of the interim reports will be as specified in the DOE-approved *Metrics and Benefits Reporting Plan*. The frequency should be tailored to the specifics of each project. The Recipient shall also provide the data sets identified in the approved reporting plan in conjunction with their report submission. The TPRs shall include the status of impact metrics and cost-benefit data and analyses with respect to the pre-demonstration (baseline) system

configuration and the demonstrated system configuration, as applicable. *Impact metrics* refer to smart grid capabilities enabled by projects and the measurable impacts of smart grid projects that deliver technical and economic value.

Interoperability and Cyber Security (I&CS) Assessment Report

The Recipient shall submit an Interoperability and Cyber Security (I&CS) Assessment Report which shall document and summarize all of I&CS-related work performed during the award period and the associated results in a comprehensive manner. This report shall not merely be a compilation of information contained in previously submitted plans and periodic reports, but shall present that information in an integrated, stand-alone fashion. It must address all activities and topics that were discussed in the latest I&CS Plan. The I&CS Assessment Report is due 60 days prior to project expiration.

F. AMERICAN RECOVERY AND REINVESTMENT ACT REPORTING

See Special Award Term entitled Reporting and Registration Requirements under Section 1512 of the Recovery Act. The reports are due no later than ten calendar days after each calendar quarter in which the recipient receives the assistance award funded in whole or in part by the Recovery Act. Additional information on complying with this requirement can be found at:

Department of Energy - OMB Reporting Help

(http://www.energy.gov/recovery/ARRA_Reporting_Requirements.htm)

Budget Information - Non Construction Programs

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. Project Period				\$23,940,112	\$25,890,168	\$49,830,280
2.						
3.						
4.						
5. Totals				\$23,940,112	\$25,890,168	\$49,830,280
Section B - Budget Categories						
6. Object Class Categories		Grant Program, Function or Activity				Total (5)
		(1) Federal	(2) Non-Federal	(3)	(4)	
a. Personnel		\$8,209,197	\$2,827,883			\$11,037,080
b. Fringe Benefits		\$0	\$0			\$0
c. Travel		\$196,375	\$20,100			\$216,475
d. Equipment		\$0	\$5,248,848			\$5,248,848
e. Supplies		\$1,026,840	\$3,360,510			\$4,387,350
f. Contractual		\$11,037,100	\$12,461,228			\$23,498,328
g. Construction		\$0	\$0			\$0
h. Other		\$1,204,497	\$202,500			\$1,406,997
i. Total Direct Charges (sum of 6a-6h)		\$21,674,009	\$24,121,069			\$45,795,078
j. Indirect Charges		\$1,324,486	\$1,384,426			\$2,708,912
k. Totals (sum of 6i-6j)		\$22,998,495	\$25,505,495			\$48,503,990
7. Program Income						\$0

Section C - Non-Federal Resources						
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) Totals		
8. Project Period	\$17,209,163		\$8,681,005	\$25,890,168		
9.						
10.						
11.						
12. Total (sum of lines 8 - 11)	\$17,209,163		\$8,681,005	\$25,890,168		
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	\$0	
Section F - Other Budget Information						
21. Direct Charges						
22. Indirect Charges						
23. Remarks						

Instructions for the SF-424A

Public Reporting Burden for this collection of information is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Please do not return your completed form to the Office of Management and Budget; send it to the address provided by the sponsoring agency.

General Instructions

This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the later case, Sections A, B, C, and D should provide the budget for the first budget period (usually a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary Lines 1-4 Columns (a) and (b)

For applications pertaining to a **single** Federal grant program (Federal Domestic Assistance Catalog number) and **not requiring** a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a **single** program requiring budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to multiple programs where none of the programs require a breakdown by function or activity, enter the catalog program title on each line in Column (a) and the respective catalog number on each line in Column (b).

For applications pertaining to **multiple** programs where one or more programs **require** a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1-4, Columns (c) through (g)

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should not equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

Section B. Budget Categories

In the column headings (a) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets are prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

Lines 6a-i—Show the totals of Lines 6a to 6h in each column.

Line 6j—Show the amount of indirect cost.

Line 6k—Enter the total of amounts on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5.

Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the federal grantor agency in determining the total amount of the grant.

Section C. Non-Federal Resources

Lines 8-11—Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet.

Column (a)—Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

Column (b)—Enter the contribution to be made by the applicant.

Column (c)—Enter the amount of the State's cash and in-kind contribution if the applicant is not a State or State agency. Applicants which are a State or State agencies should leave this column blank.

Column (d)—Enter the amount of cash and in-kind contributions to be made from all other sources.

Column (e)—Enter totals of Columns (b), (c), and (d).

Line 12—Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f) Section A.

Section D. Forecasted Cash Needs

Line 13—Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14—Enter the amount of cash from all other sources needed by quarter during the first year.

Line 15—Enter the totals of amounts on Lines 13 and 14.

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

Lines 16-19—Enter in Column (a) the same grant program titles shown in Column

(a), Section A. A breakdown by function or activity is not necessary. For new applications and continuation grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods (usually in years). This section need not be completed for revisions (amendments, changes, or supplements) to funds for the current year of existing grants.

If more than four lines are needed to list the program titles, submit additional schedules as necessary.

Line 20—Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

Line 21—Use this space to explain amounts for individual direct object-class cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

Line 22—Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23—Provide any other explanations or comments deemed necessary.