



ANTONIO R. VILLARAIGOSA
Mayor

Commission
LEE KANON ALPERT, *President*
FORESCEE HOGAN-ROWLES
JONATHAN PARFREY
THOMAS S. SAYLES
BARBARA E. MOSCHOS, *Secretary*

AUSTIN BEUTNER
General Manager
RAMAN RAJ
Chief Operating Officer

June 2, 2010

The Honorable City Council
City of Los Angeles
Room 395, City Hall
Los Angeles, California 90012

Honorable Members:

Subject: Smart Grid Demonstration Cooperative Project Agreement with National Aeronautics and Space Administration, University of California at Los Angeles, University of Southern California

Pursuant to Charter Section 262(a)(2) and 373, enclosed for approval by your Honorable Body is Resolution No. 010-345, adopted by the Board of Water and Power Commissioners (Board) on June 1, 2010, approved as to form and legality by the City Attorney, which approves the Smart Grid Demonstration Cooperative Project Agreement with National Aeronautics and Space Administration, University of California at Los Angeles (UCLA), University of Southern California (USC), and the Smart Grid Regional Demonstration Project Intellectual Property Agreement with California Institute of Technology, UCLA, USC. As directed by the Board, transmitted to you are supporting documents.

If there are any questions regarding this item, please contact Ms. Winifred Yancy, Manager – Government and Neighborhood Relations, at (213) 367-0025, or Mr. Aram Benyamin, at (213) 367-4435.

Sincerely,

Barbara E. Moschos
Board Secretary

BEM:oja

Enclosures: LADWP Resolution
Board Letter
Smart Grid Demonstration Cooperative Project Agreement

c/enc: Mayor Antonio Villaraigosa
Councilmember Jan C. Perry, Chair, Energy and the Environment Committee
Mr. Gerry F. Miller, Chief Legislative Analyst
Mr. Miguel A. Santana, City Administrative Officer
Mr. Rafael Prieto, Legislative Analyst
Mr. William R. Koenig, Chief Administrative Analyst
Ms. Winifred Yancy
Mr. Aram Benyamin

Water and Power Conservation...a way of life

111 North Hope Street, Los Angeles, California 90012-2607 Mailing address: Box 51111, Los Angeles 90051-5700
Telephone: (213) 367-4211 Cable address: DEWAPOLA



BY _____
DEPUTY
CITY CLERK

2010 JUN -4 AM 11:32

RECEIVED
CITY CLERK'S OFFICE

RESOLUTION NO. 010 345

WHEREAS, in August 2009, the City of Los Angeles Department of Water and Power (LADWP) applied for a federal grant from the United States Department of Energy (DOE) for the implementation of a Smart Grid demonstration project (the Smart Grid Project) in collaboration with the University of Southern California (USC), the University of California at Los Angeles (UCLA), and the National Aeronautics and Space Administration (NASA) for the Jet Propulsion Laboratory (JPL) which is operated by the California Institute of Technology (Caltech) (collectively, the Project Participants); and

WHEREAS, LADWP was awarded a \$60 million matching grant (the Smart Grid Grant) by DOE in December 2009, and the Board of Water and Power Commissioners authorized the LADWP on March 18, 2010, to accept and acknowledge the Smart Grid Grant; and

WHEREAS, the proposed Smart Grid Demonstration Cooperative Project Agreement (Project Agreement) among LADWP, UCLA, USC, and NASA, and the Smart Grid Demonstration Project Intellectual Property Agreement among LADWP, UCLA, USC, and Caltech (IP Agreement) will allow the Project Participants to carry out the goals of the Smart Grid Grant; and the Smart Grid Project has four main components, namely: demand response, electric vehicles, cyber security, and behavior studies; and

WHEREAS, the Project Agreement and IP Agreement each has a term of 5 years, and the total budget under the Project Agreement is approximately \$123 million, with a maximum expenditure of LADWP funds of \$43 million; and funds provided to NASA under the Project Agreement must be paid in advance.

NOW, THEREFORE, BE IT RESOLVED that the Project Agreement between LADWP, UCLA, USC, and NASA, and the IP Agreement between LADWP, USC, UCLA, and Caltech, now on file with the Secretary of the Board and approved as to form and legality by the City Attorney, be and the same are hereby approved.

BE IT FURTHER RESOLVED that the Board finds that under City Charter §371(e)(2) the use of a competitive process for the Project Agreement and IP Agreement would not be practicable or advantageous as the efforts under the Project Agreement and IP Agreement are for professional and expert services of a temporary and occasional character.

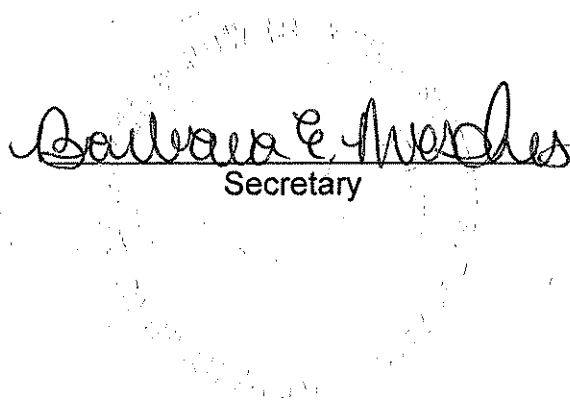
BE IT FURTHER RESOLVED that the Board finds that under City Charter §1022, due to the expert nature of the services to be provided, the work under the Project Agreement and IP Agreement can be more economically or feasibly performed by outside entities than by LADWP or City employees.

BE IT FURTHER RESOLVED that the President or Vice President of the Board, or the General Manager, or such person as the General Manager shall designate in writing, and the Secretary, Assistant Secretary or the Acting Secretary of the Board be and they are hereby authorized and directed to execute said Project Agreement and IP

Agreement for and on behalf of the LADWP, subject to City Council approval by ordinance of such agreements.

BE IT FURTHER RESOLVED that the Chief Accounting Employee of the LADWP, upon proper certification, is authorized and directed to draw demands on the Power Revenue Fund in payment of obligations arising under the Project Agreement and the IP Agreement.


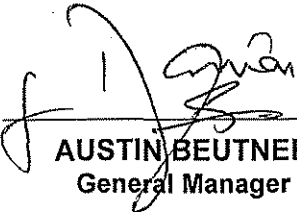
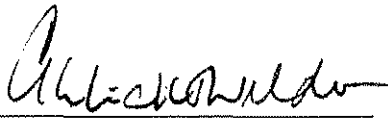

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held JUN 01 2010


Barbara E. Morales
Secretary

APPROVED AS TO FORM AND LEGALITY
CARMEN A. TRUTANICH, CITY ATTORNEY

MAY 12 2010
BY *Lonnie Eldridge*
LONNIE ELDRIDGE
DEPUTY CITY ATTORNEY

LADWP BOARD APPROVAL LETTER

TO: BOARD OF WATER AND POWER COMMISSIONERS		DATE: May 13, 2010
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <hr style="width: 80%; margin: 0 auto;"/> <p>RAMAN RAJ Chief Operating Officer</p> </div> <div style="text-align: center;">  <hr style="width: 80%; margin: 0 auto;"/> <p>AUSTIN BEUTNER General Manager</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <hr style="width: 80%; margin: 0 auto;"/> <p>CECILIA K. T. WELDON Chief Administrative Officer</p> </div> <div style="text-align: center;">  <hr style="width: 80%; margin: 0 auto;"/> <p>ARAM BENYAMIN Senior Assistant General Manager- Power System</p> </div> </div>		<p>SUBJECT: Smart Grid Demonstration Cooperative Project Agreement Among National Aeronautics and Space Administration (NASA), University of California at Los Angeles (UCLA), University of Southern California (USC), and Los Angeles Department of Water and Power (LADWP) and Smart Grid Demonstration Project Intellectual Property Agreement Among the California Institute of Technology (Caltech), UCLA, USC, and LADWP</p>
		<p>FOR COMMISSION OFFICE USE:</p>
<p>CITY COUNCIL APPROVAL REQUIRED: Yes X No</p>	<p>IF YES, BY WHICH CITY CHARTER SECTION: 262(a)(2) and 373</p>	

PURPOSE

Transmitted for approval by your Honorable Board is a Resolution, approved as to form and legality by the City Attorney, authorizing the Los Angeles Department of Water and Power (LADWP) to enter into the Smart Grid Demonstration Cooperative Project Agreement (Project Agreement) and the Smart Grid Regional Demonstration Project Allocation of Rights in Intellectual Property Agreement (IP Agreement) (collectively, Agreements). The Agreements will assist LADWP in carrying out work under a \$60 million matching grant received by LADWP from the Department of Energy (DOE) related to smart grid (Smart Grid) technologies which was accepted by the Board on March 18, 2010 (the Smart Grid Grant). The Project Agreement establishes a working relationship between LADWP, the University of California at Los Angeles (UCLA), the University of Southern California (USC), and the National Aeronautics and Space Administration (NASA) on behalf of the Jet Propulsion Laboratory (JPL) an operating division of the California Institute of Technology (Caltech) (each a Party, and collectively, the Parties) while the IP Agreement allocates the intellectual property rights to innovations which may emerge out of the Smart Grid Grant.

The total Smart Grid Grant budget under the Project Agreement is approximately \$120 million. It is currently anticipated that UCLA and USC will each receive approximately \$10 million of the DOE funds and each will be responsible for cost sharing (both in-kind and cash expenditures) of \$10 million, and JPL will receive approximately \$6 million total of which \$3 million is from the DOE funds and \$3 million is from LADWP's non-federal funds. In addition to the total Smart Grid Grant project budget of \$120 million, LADWP may expend up to an additional \$3 million on Smart Grid related projects through this Project Agreement, for a total overall budget of approximately \$123 million. LADWP may expend funds which are intended to qualify for Smart Grid Grant matching purposes through the Project Agreement or through LADWP's other contracting processes at LADWP's discretion.

Council Approval is required.

BACKGROUND

In early 2009, DOE, through the American Recovery and Reinvestment Act (ARRA), released a Funding Opportunity Award for the Smart Grid Grant (Award No. DOE FOA-036). LADWP submitted an application in August 2009, and was awarded a \$60 million matching grant on December 31, 2009. The Board of Water and Power Commissioners (Board) authorized acceptance of the Smart Grid Grant on March 18, 2010. As described below, the Project Agreement and the associated IP Agreement outlines the roles, duties, and responsibilities of the Smart Grid program, including provisions for the schedule, task orders, and budget.

The Smart Grid Project will leverage LADWP's expertise in power systems and power delivery, while USC, UCLA, and NASA (the Project Participants) will provide a multi-dimensional understanding of smart grid technologies. The Smart Grid Grant program will use the USC and UCLA campuses as well as various sites in Los Angeles as testing grounds to demonstrate four interrelated project initiatives: 1) Demand Response, 2) Behavioral Studies, 3) Cyber Security, and 4) Electric Vehicles.

Technologies developed as a result of the research and development by the various activities will be tested in LADWP's demonstration labs, and actual field tests will be performed at a number of LADWP facilities and locations before any large-scale deployment is initiated. The results and experience gained through the Smart Grid Project will assist LADWP in deploying elements of Smart Grid technology through LADWP's strategic planning process.

PROJECT AGREEMENT

The Project Agreement establishes a working relationship between LADWP and the Project Participants to facilitate and streamline the collaborative process while achieving

the goals of the Project. Below is an outline of the substantive aspects of the Project Agreement.

The Project's organizational structure is set forth in the Project Agreement, and has four main components: an Executive Committee (EC); a Project Management Office (PMO); Project Managers (PM); and University Research Project Leads (RPLs). The EC functions to provide direction and guidance to the program and to ensure cooperation and interchange of information between the Parties. The EC is comprised of the Program Director, three executive LADWP representatives and three University representatives. Although the EC can discuss and vote on matters, the three executive LADWP members have the final authority over any specific course of action under the Project. The EC will also review the budget and project schedule.

The PMO arranges for the performance of Project activities. This includes being the single point of contact with DOE, managing all reporting functions and processing payment requests. The Project Managers are the implementers of the project, with one PM per research area. The PMs will be responsible for coordinating efforts with the University research teams, and will ensure adherence to cost estimates, plans and schedules. The PMs will work closely with the assigned University Research Project Leads, who will be the technical and research project leads for each of the four Project research areas.

The Project Agreement further outlines the detailed process for how LADWP will administer task orders, budget and schedule. A preliminary Project budget and schedule are included as exhibits to the Project Agreement. Task orders will be issued by the PMO based on the schedule, budget and timeline for each project area. After completion of a task order or deliverable under a task order, the University or Universities participating in the Task Order shall submit evidence of completion and a payment request (Payment Request) to the PMO. Payment from DOE funds will not be made by LADWP to a University unless and until DOE funds have been received by LADWP for such payment. All payments will be made after certification of completion, and after verification that any other all requirements of this Project Agreement have been met, by the Project Director and PMO. Once there has been final approval from the PMO, LADWP shall remit payments to the appropriate Parties within sixty (60) days after LADWP receives funds from DOE. Due to federal requirements, NASA requires to be paid in advance. LADWP will provide funding to NASA a maximum estimated cost of \$9 million to conduct the proposed research and/or testing under this Project Agreement. A pro forma invoice will be submitted to LADWP for each incremental payment, and payment will be made to NASA based on an agreed-upon scope of work and delivery schedule. It should be noted that the Project Agreement does not obligate LADWP to expend any particular amount of funds.

The IP Agreement, which is an exhibit to the Project Agreement, outlines the intellectual property rights that apply to LADWP and the Participants. LADWP will receive a non-

exclusive, royalty-free license to all technologies which emerge from the Smart Grid Project, and will also have a time-limited right to elect an exclusive commercialization license. Caltech is a signatory to the IP Agreement because Caltech operates JPL on behalf of NASA, and Caltech is authorized by NASA to arrange for the licensing of intellectual property that may arise from work at JPL. Because this Smart Grid Grant is federally funded under the ARRA, the federal government retains a royalty-free license to intellectual property for authorized government purposes. Under the Smart Grid Grant terms, the standard intellectual property procedure is that the federal government will own intellectual property resulting from grant monies, and the participants (including LADWP) will then have a license to use the technology. However, DOE has stated that a "class waiver" will be granted that will allow LADWP to own intellectual property and the resulting technologies invented by LADWP.

Due to the diverse nature of the parties involved, which include a state university (UCLA), private universities (USC and Caltech), and federal agencies and research centers (NASA and JPL), the Agreements contain a number of deviations from LADWP's standard terms and conditions. For example, LADWP, USC, and UCLA have agreed to mutually and proportionally indemnify each other for negligent or intentional acts related to the Project Agreement, while no indemnification was obtained from NASA although LADWP attempted to negotiate such terms. In general, where the Parties were unable to follow LADWP's standard provisions, they have agreed to follow corresponding state and/or federal rules and regulations. The Parties have also agreed to flow down, to the extent legally permissible, certain provisions of the Project Agreement, the LADWP standard provisions, and DOE Grant terms to contractors and subcontractors who may be engaged under the Project.

COST AND DURATION

The total Smart Grid Grant project budget is approximately \$120 million. UCLA and USC will each receive approximately \$10 million of the DOE funds and each will be responsible for cost sharing of \$10 million, and JPL will receive approximately \$6 million total of which \$3 million is from the DOE funds and \$3 million is from LADWP's non-federal funds. In addition to the total Smart Grid Grant project budget of \$120 million, LADWP may expend up to an additional \$3 million on Smart Grid related projects through this Project Agreement, for a total LADWP budget of up to \$43 million and an overall budget of approximately \$123 million. To the extent LADWP receives matching funds from DOE for expenditures under the Project Agreement or for expenditures which otherwise qualify for matching funds under the Smart Grid Grant, LADWP will be required to expend such matching funds on projects related to the LADWP-DOE Smart Grid Grant project.

The Agreements have five (5)-year terms from the date of execution.

FUNDING SOURCE

The Smart Grid Project expenditures are budgeted and funded out of various Power and Joint Revenue Funds. The Financial Services Organization reviewed and validated funds for the project.

Power Revenue Fund

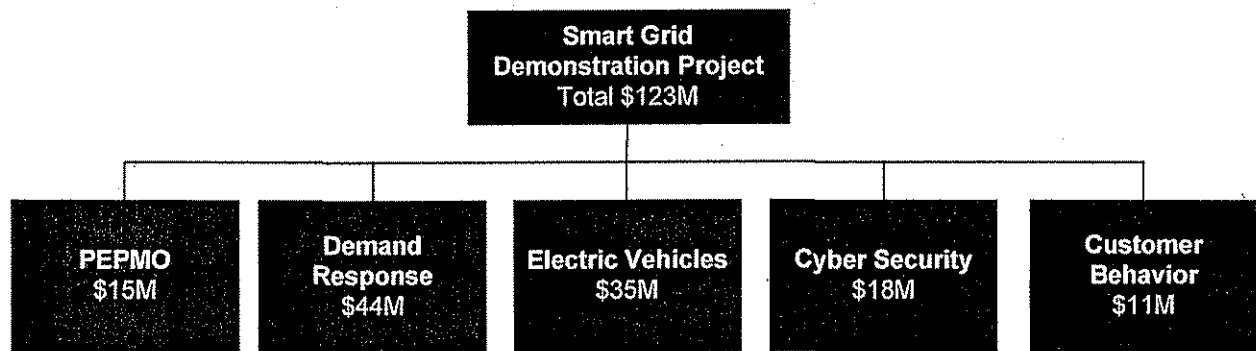
Fiscal Years: 2010/2011 – 2014/2015
Functional Item Nos.: 21642, 28840, and 29020
Location in Budget: Under Power System Information and Advanced Technologies' and Power Executive Office's budget

Joint Revenue Fund

Fiscal Years: 2010/2011 – 2014/2015
Functional Item Nos.: 28-561, 289-90, 211-12, 288-94, 289-11, 289-15, 289-16, 211-12, 371-3520, 407-0210, 371-3225, 288-70
Location in Budget: Under Fleet Engineering, Information Technology, and and Customer Service Division's budgets

The Financial Services Organization reviewed and validated funds to be distributed in the following manner.

The overall Program Expenditure, including DOE matching funds, will be as follows:



FISCAL IMPACT STATEMENT

LADWP currently plans to expend up to \$43 million of its own funds on this Smart Grid Project. However, LADWP may voluntarily cease participation and expenditures under the Project Agreement at any time by sixty (60) days' written notice to the Participants. With respect to future LADWP activities, as a result of the Demonstration Project, LADWP may potentially obtain Smart Grid technologies which could enhance LADWP's

revenue and reduce Operations & Maintenance costs. Because payment to NASA must be made in advance under the Project Agreement, such advance payments must be approved by an ordinance of the City Council pursuant to City Charter §262(a)(2).

TYPE OF INSURANCE COVERAGE(S)

Caltech and NASA are self-insured.

USC and UCLA will provide confirmation of insurance coverage as set by LADWP Risk Management below:

X	Workers' Compensation	\$3,000,000	<input type="checkbox"/>	Property Damage	
X	Automobile Liability	\$5,000,000	<input type="checkbox"/>	Water Craft	
X	General Liability	\$10,000,000	<input type="checkbox"/>	Pollution	
X	Professional Liability	\$5,000,000	<input type="checkbox"/>	Crime	
<input type="checkbox"/>	Aircraft Liability		<input type="checkbox"/>	Asbestos	

CONTRACT ADMINISTRATION

A Power Engineering and Project Management Office has been set up to ensure that all DOE requirements are adhered to. This office will consist of LADWP employees and expert consultants in the area of grant management and power engineering. LADWP will be the designated contact for DOE in this Smart Grid Project. In addition, LADWP will follow, to the extent feasible under the Smart Grid Grant, the City, and LADWP established processes and procedures for procurement and establishment of contracts and subcontracts. However, LADWP must "flow down" certain provisions in the grant documents to contractors who may take part in the Smart Grid Project.

Time and Material: Yes No

Markup: None

FORMAL OBJECTIONS TO AWARD OF CONTRACT

None

JOB OPPORTUNITIES AND TRAINING POLICY Applicable Not Applicable

INTERNAL AUDIT Yes No

EXTERNAL AUDIT Yes No

Board of Water and Power Commissioners

Page 7

May 13, 2010

METHOD OF SELECTION

Competitive Cooperative Purchase Sole Source Not Applicable

Because the project involves specialized academic and technical expertise, competitive bidding for the work under this Project Agreement would not be practicable or advantageous to LADWP.

CHARTER SECTION 1022 FINDINGS AND BASIS THEREOF

Due to the specialized nature of the expertise and work involved in the Project Agreement, the work is more economically or feasibly performed by the Parties than by LADWP or City employees.

MEMORANDUM OF UNDERSTANDING PROPOSED CONTRACT REVIEW PROCESS

A Notice of Compliance was issued by Labor Relations on May 21, 2010.

ENVIRONMENTAL DETERMINATION

In accordance with the California Environmental Quality Act (CEQA), it has been determined that entering into a Smart Grid Demonstration Cooperative Project Agreement among LADWP, NASA, UCLA, and USC; entering into a Smart Grid Demonstration Project Intellectual Property Agreement among LADWP, Caltech, UCLA, and USC; and providing funding for The Smart Grid Project is exempt pursuant to the Class 6 exemptions described in CEQA Guidelines Section 15306. Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

LOS ANGELES CITY COUNCIL APPROVAL

An Executive Directive No. 4 waiver was granted by the Mayor's Office on May 5, 2010.

CONFLICT OF INTEREST STATEMENT

All conflict of interest procedures were followed. No conflict of interest issues were identified.

Board of Water and Power Commissioners
Page 8
May 13, 2010

RECOMMENDATION

It is recommended that your Honorable Board adopt the attached Resolution authorizing LADWP enter into the Smart Grid Demonstration Cooperation Project Agreement and the related IP Agreement.

JXC: tg
Attachments

e-c/atts: Austin Beutner
Raman Raj
Richard M. Brown
Aram Benyamin
James B. McDaniel
Cecilia K. T. Weldon
Lorraine A. Paskett
Jeffery L. Peltola
Matthew M. Lampe
Maria Sison-Roces
John X. Chen
Maria Sharma

Smart Grid Demonstration Project Agreement

**SMART GRID DEMONSTRATION COOPERATIVE PROJECT
AGREEMENT**

AMONG

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
UNIVERSITY OF CALIFORNIA, LOS ANGELES
UNIVERSITY OF SOUTHERN CALIFORNIA**

AND

CITY OF LOS ANGELES DEPARTMENT OF WATER AND POWER

Smart Grid Demonstration Project Agreement

SMART GRID DEMONSTRATION PROJECT AGREEMENT

1. **ARTICLE 1: PARTIES**. The Parties to this project agreement (“Project Agreement”), dated for convenience as of March 15, 2010, are the University of Southern California (“USC”); the REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California constitutional corporation, acting through its Los Angeles Campus (“UCLA”); the National Aeronautics and Space Administration (“NASA”) for the Jet Propulsion Laboratory (“JPL”), an operating division of the California Institute of Technology; and the City of Los Angeles acting by and through the Department of Water and Power (“LADWP”) (each a “Party”, and collectively, the “Parties”). USC, UCLA, and JPL are also referred to herein individually as a “University” and collectively as “Universities.”

2. **ARTICLE 2: RECITALS**

2.1. WHEREAS, a significant and growing need exists to meet long-term requirements for energy through the use of an electrical network that allows for intelligent real-time management, operation, and utilization of energy resources and demand (a “Smart Grid”); and

2.2. WHEREAS, LADWP, in conjunction with the Universities, has been awarded a sixty-million dollar Smart Grid Demonstration Grant (“Smart Grid Grant”) from the United States Department of Energy (“DOE”) as of December 31, 2009; and

2.3. WHEREAS, the Parties desire to enter into this Project Agreement to develop and implement the project which is the subject of the Smart Grid Grant (the “Project”). The Project has four chief components, which are: Demand Response, Electric Vehicles, Cybersecurity, and Behavior Studies (the “Project Areas”); and

Smart Grid Demonstration Project Agreement

2.4. WHEREAS, this Project Agreement is entered into by NASA pursuant to 42 U.S.C. 2473(c)(5) and (6), and section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The Parties acknowledge that the U.S. Federal Government as represented by NASA is a party to this Agreement and NASA will employ Caltech to provide NASA's portion of the work under the Agreement pursuant to NASA's contract with Caltech to operate JPL. Caltech will provide these services under contract to NASA, and, therefore, is not a Party to this Agreement. Because Caltech receives intellectual property rights when operating under the JPL contract for NASA in inventions and software, Caltech has entered into a separate intellectual property agreement with the other Parties to this Agreement which is attached as an Exhibit to this Agreement. By entering into the intellectual property agreement, Caltech does not imply that it is a Party to this Project Agreement; and

2.5. WHEREAS, the Parties desire to memorialize their understanding regarding the foregoing, as set forth in this Project Agreement.

2.6. NOW, THEREFORE, in consideration of the foregoing premises, the mutual promises, and covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby enter into this Project Agreement and agree as follows:

3. ARTICLE 3: PROJECT AGREEMENT PURPOSE, SOURCES AND USES OF FUNDS, TERM, AND APPOINTMENT

3.1. Purpose. The purpose of this Project Agreement between the Parties is to establish a working relationship between the Parties to achieve the following goals (the "Project Agreement Goals"):

Smart Grid Demonstration Project Agreement

- 3.1.1. To establish an arrangement to facilitate and streamline the collaborative process while achieving the goals of the Project.
- 3.1.2. To leverage costs and resources to effectively utilize the resources and specialties of each Party.
- 3.1.3. To demonstrate the potential benefits of focused research in advanced grid technologies on a regional electric grid.
- 3.1.4. To increase awareness, outreach, and participation in the potential benefits of a Smart Grid.
- 3.1.5. To facilitate the integration of advanced technologies in existing electric networks to improve system performance, power flow control, and reliability.
- 3.1.6. To produce a more secure Smart Grid to allow the proliferation of a variety of technologies while maintaining secure and reliable operations.
- 3.1.7. To establish protocols and standards that allow for the measurement and validation of energy savings and fossil fuel emission reductions associated with the installation of energy efficiency and demand response technologies and practices.

3.2. Sources and Uses of Funds

- 3.2.1. Sources of Funds: LADWP has received DOE cooperative agreement # DE OE0000192, listed through the Catalog of Federal Domestic Assistance (CFDA # 81.122), which provides approximately \$60 million for the five-year period of January 1, 2010 – December 31, 2014. DOE generally requires a 1-to-1 expenditure or cost sharing (collectively “Cost Sharing”) of non-federal funds, which results in a total Smart Grid Grant project budget of approximately

Smart Grid Demonstration Project Agreement

\$120 million. It is currently anticipated that UCLA and USC will each receive approximately \$10 million of the DOE funds and will each be responsible for Cost Sharing of \$10 million, and JPL will receive approximately \$6 million total of which \$3 million is from the DOE funds and \$3 million is from LADWP's non-federal funds. In addition to the total Smart Grid Grant project budget of \$120 million, LADWP may expend up to an additional \$3 million on Smart Grid related projects through this Project Agreement, for a total overall budget of approximately \$123 million. The Parties agree and acknowledge that these budgetary estimates are preliminary, and may be revised or altered in accordance with the terms of this Project Agreement. The Parties further agree and acknowledge that no specific amount of funds, or any funds, will necessarily be expended by any Party under this Project Agreement.

3.2.2. Uses of Funds: The following list shows the Universities anticipated involvement in the demonstration projects and their contribution or use of funds ordered by funding significance. The Parties agree that the list is anticipatory and preliminary only, and may be changed or altered in accordance with the terms of this Project Agreement.

USC

- Demand Response
- Behavioral Studies
- Cyber Security
- Electrical Vehicles

UCLA

- Electrical Vehicles
- Demand Response
- Behavioral Studies

Smart Grid Demonstration Project Agreement

JPL

- Cyber Security
- Demand Response

3.3. Term

3.3.1. The term of this Project Agreement shall be five (5) years from the date of execution by the last signatory to this Project Agreement.

3.3.2. This Project Agreement may be extended by mutual agreement among the Parties in writing for up to an additional three (3) years, provided that the governing bodies and authorities of each Party approves, at the sole discretion of each. This Project Agreement may be extended without the participation of one or more Universities electing not to participate, provided that LADWP and at least one University wish to continue the Project. If no University wishes to further participate, the Parties agree that LADWP is free to continue ongoing participation with DOE for Smart Grid Grant activities as LADWP may find convenient.

3.4. Appointment. The Parties hereby appoint, designate, and authorize LADWP to be the Project Lead and Point of Contact with DOE to carry out, on behalf of the Parties and as principal on its own behalf, the Project Agreement Goals in accordance with this Project Agreement.

4. ARTICLE 4: ROLES, DUTIES, AND RESPONSIBILITIES

4.1. Program Sponsor: Raman Raj, Chief Operating Officer, is the program sponsor (“Program Sponsor”) of the entire Smart Grid program at the LADWP.

4.2. Executive Committee: Composition, Duties, and Responsibilities

4.2.1. Structure of the Executive Committee (“EC”): The Executive Committee is comprised of the Program Director, three (3) executive LADWP representatives

Smart Grid Demonstration Project Agreement

as designated by LADWP, and three (3) representatives from the Universities (one (1) representative from each University), for a total of seven (7) members (the "Members"). Each Party may, at any time by informing the Program Director in writing (including email), change the designation of its representatives or specify an alternate or alternates to act as its representatives on the Executive Committee in the absence of a regular Member or Members. The Chairperson of the Executive Committee shall be the Program Director or as otherwise specified by LADWP. The Program Director is not a voting member of the Executive Committee.

4.2.2. Designated Executive Committee Members: Upon the Effective Date of this Project Agreement, the designated Executive Committee Members shall be the following:

4.2.2.1. LADWP

- Aram Benyamin, Senior Assistant General Manager, Power System
- Matthew M. Lampe, Chief Information Officer
- John X. Chen, Assistant General Manager, Customer Service
- Ali Morabbi, LADWP Smart Grid Program Director

4.2.2.2. USC

- Donald Paul, Executive Director of the USC Energy Institute, Professor, and USC Principal Investigator

4.2.2.3. UCLA

- Rajit Gadh, Professor and UCLA Principal Investigator

4.2.2.4. JPL

- Dean V. Wiberg, Program Manager, Commercial Program Office

Smart Grid Demonstration Project Agreement

4.2.3. Role: The role of the EC is to provide direction and guidance to the Program Director and the Project Management Officer (“PMO”), and to secure the effective cooperation and interchange of information among the Parties in connection with major Project matters, including without limitation matters related to: the Project Management Plan (“PMP”); the performance of activities to carry out the Project (variously, “Project Activities” or “Project Activity”); the preliminary Project Budget (attached to this Project Agreement and incorporated herein as Exhibit B) and revisions thereto; the preliminary Project Schedule (attached to this Project Agreement and incorporated herein as Exhibit C) and revisions thereto; and Project output, deliverables, related purchases to be acquired for the Project or any Project Activity, data, results, equipment, goods, facilities, technical information, and services provided (collectively “Project Output”) that may arise from time to time.

4.2.4. Duties and Responsibilities: The Executive Committee shall meet on a schedule as agreed between the Parties, but in no event less than once per month. Subject to any express limitations in this Project Agreement, the duties and responsibilities of the Executive Committee shall include but not be limited to:

4.2.4.1. The Executive Committee is a voting body providing direction to the Program Director, the PMO, and Project Managers of each Project Area. If there is a tied vote, the three LADWP executive voting members shall make the final decision.

4.2.4.2. The Chairperson or designee shall prepare the agendas for the EC meetings. Members shall send requests for an item to be placed on the

Smart Grid Demonstration Project Agreement

agenda to the Chairperson within five (5) days of the meeting. The Chairperson shall distribute a final agenda within two (2) business days of the meeting to the Executive Committee. Beyond the regularly scheduled meetings of the EC, the Chairperson may call a meeting of the EC upon reasonable notice at the request of any Member.

- 4.2.4.3. For each item on the agenda, the EC will allow for full and complete discussion between the Members. Votes can be taken at the suggestion of any Member on any item, provided that either 1) all six Members of the EC are present; or 2) all of the LADWP Members are present.
- 4.2.4.4. Review Project documents and reports as provided by the Program Director, the PMO, and Project Managers.
- 4.2.4.5. Monitor the continuation and completion of Project Activities and Project Output.
- 4.2.4.6. Provide direction to the Program Director, the Project Managers, and the heads of research (the "Research Project Leads" or "RPLs") in each Project Area with respect to Project Activities.
- 4.2.4.7. Review and provide input on all proposed amendments to this Project Agreement.
- 4.2.4.8. Review and approve proposed material procurement arrangements, purchases, and acquisitions as submitted to the EC by the Program Director over the limit of the Program Managers, if a limit for Program Managers is established.

Smart Grid Demonstration Project Agreement

4.2.4.9. Conduct all other functions and duties necessary or desirable to carry out the Project in a manner consistent with this Project Agreement.

4.2.4.10. Review and approve changes, which shall be within the Project Cost Limit and LADWP Expenditure Limit to the Project Budget, and changes to the Project Schedule. The Parties agree that LADWP has the final decision-making authority with respect to the PMP, the Project Budget, the Project Schedule, and Project Activities. Although votes of the EC will be considered by LADWP, such votes are non-binding and advisory only.

4.3. Project Management Office and Program Director: The Project Management

Responsibilities will be overseen by the PMO, led by the Program Director, and is comprised of the core team, administrative support staff, and a business architecture team. The Program Director shall be appointed by LADWP. The PMO will be supported by internal LADWP project management staff and LADWP consultants (the "PMO Staff"). In this Project Agreement, where references to the Program Director, the PMO, or PMO Staff are made under which the Program Director, the PMO, or PMO Staff take action or perform duties (including, without limitation and by way of example, conducting audits, releasing requests for proposals (RFPs), entering into contracts, and like matters), it shall be understood that LADWP as a Party is actually taking such actions, and that the Program Director, the PMO, or PMO Staff are not to be considered separate legal entities from LADWP.

4.4. Designated Program Director: Upon the Effective Date of this Project Agreement, the designated Program Director shall be:

Ali Morabbi, Manager of Power System Information and Advanced Technologies

Smart Grid Demonstration Project Agreement

LADWP may change the Program Director upon written notice (including email) to the other Parties.

4.5. Duties and Responsibilities of the PMO. The PMO is authorized to perform and arrange for the performance of Project Activities. The duties and responsibilities of the PMO under this Project Agreement shall include but not be limited to:

- 4.5.1.** The PMO shall be the single Point of Contact (POC) with the DOE, including administering and submitting reporting documents as required and described in Exhibit A and as may be required by any other federal law, rule, or regulation. The PMO shall prepare a Statement of Project Objectives (SOPO) in accordance with the requirements of the DOE.
- 4.5.2.** The PMO will manage reporting functions (including but not limited to milestone, time, and status reporting), Project Activity scheduling, risk management, project communications, financial and benefits realization, management of the change control process, release management, and Task Order issuance as set forth in this Article 4 and in Article 5 of this Project Agreement. The PMO is the only entity authorized to issue Task Orders under this Project Agreement.
- 4.5.3.** The PMO will include a Business Architecture Team (BAT), which is proposed by the PM and approved by the EC to coordinate integration of architecture definitions, process design, process implementation, use case development, and provide testing support to the PMO by the PMs. The BAT shall be comprised of members representative with the appropriate and necessary skills required to carry out its assigned responsibilities.

Smart Grid Demonstration Project Agreement

- 4.5.4. The PMO shall develop and submit to the Executive Committee for approval a specific overall PMP including, among other items, a work breakdown with respect to each Project Area, Project Activities, Project cost estimates, schedule and budget development, and arrangements for delivery of the Project Output.
- 4.5.5. Prepare and submit to the Executive Committee for its review and approval of revisions to the PMP including, among other items, a work breakdown with respect to each Project Area, Project Activities, Project cost estimates, schedule, budget and purchasing development, and arrangements for delivery of the Project Output.
- 4.5.6. Prepare and submit to the Executive Committee for its review and approval revisions to the Project Budget and Project Schedule.
- 4.5.7. Shall promptly inform the Executive Committee regarding significant factors or events which may affect, or have affected the PMP, the Project Schedule, the Project Budget, any Project Activity, and Project Output.
- 4.5.8. Prepare and submit any other reporting documents in addition to those set forth in this Project Agreement to federal entities, including without limitation annual cost proposals and estimates, American Recovery and Reinvestment Act (ARRA) reporting, and any other federal requirements that might be required or advisable to receive or maintain the Smart Grid Grant and any other appropriate federal funding.
- 4.5.9. The PMO will facilitate the issuance of RFPs and the subsequent procurement process with the appropriate Project Managers. LADWP procurement policies will be used by the PMO.

Smart Grid Demonstration Project Agreement

- 4.5.10. The PMO will receive and process Payment Requests for payment in accordance with Article 5 and Article 6 of this Project Agreement or any other procedures approved by the EC. The PMO will work with the PM of each respective Project Area to verify the accuracy of the Payment Requests. After the PM has completed the verification process, the Payment Requests will be sent to the PMO for processing.
- 4.5.11. Comply with any and all laws and regulations applicable to the performance of Project Activities by the PMO.
- 4.5.12. Keep and maintain, or cause to be kept and maintained, records of moneys received and expended, obligations incurred, credits accrued, and maintain or cause to be maintained for auditing by any DOE or federal audit, those accounting records used by the PMO, the Program Director or LADWP, as applicable, for the purpose of accumulating financial and statistical data for Project Activities such as, by way of example and without limitation, books of original entry, ledgers, work papers, source documents, and Task Orders.
- 4.5.13. Prepare and submit to the Executive Committee each calendar quarter after the Effective Date of this Project Agreement, a cost report ("Cost Report") which shall be developed from the records kept and maintained pursuant to this Project Agreement and which shall include both the accumulated total disbursements for each Project Area from the beginning of Project Activities including a comparison to the most recently approved Project Budget and a reconciliation of each Party's and the DOE's contribution to date for Project Activity Costs to the total disbursements to date for Project Activity Costs.

Smart Grid Demonstration Project Agreement

- 4.5.14. Submit quarterly or as required to DOE and the Executive Committee a status report ("Project Status Report") to reflect the progress of Project Activities and Project Output, and any necessary or desirable revisions to any schedule or to the PMP. The Project Status Report is intended to satisfy the Federal Reporting Requirements for Progress Reports as specified in Exhibit A and as otherwise may be required by federal law, regulation, or rule which shall include, without limitation, reporting any major Project Activities or Project Output, Project Budget status, schedule status, major changes in approaches or aims, anticipated projects or delays, changes in consortium/teaming arrangement, any product produced or technology transfer activities, or as otherwise specified by the Program Director.
- 4.5.15. The PMO shall submit special status reports to DOE as may be required by DOE or federal law, regulation, or rule.
- 4.5.16. Prepare and deliver Final invention and Patent Reports as specified in Exhibit A and as otherwise may be required or advisable under federal law, regulations, or rules and other intellectual property reports for all Parties to the DOE within ninety (90) calendar days after expiration or termination of the award or as otherwise may be required by DOE.
- 4.5.17. Manage and enforce all claims against contractors, subcontractors, suppliers, and others arising out of Project Activities through any contracts entered into by the LADWP.

Smart Grid Demonstration Project Agreement

4.5.18. The PMO is responsible for submitting to the LADWP Public Relations Office Project information requests (including public information requests) made to LADWP regarding the Project or this Project Agreement.

4.5.19. Prepare and distribute to each Party a final completion report ("Final Completion Report") upon termination of this Project Agreement, which shall include studies performed, summary of executed Project contracts and Project Output, and a final cost report for the Project Budget and Project Activities, unless otherwise specified by the Program Director.

4.5.20. Conduct all other activities deemed necessary or desirable to complete Project Activities and performing such other functions and duties at the direction of the Executive Committee or the Program Director, but in any event in a manner consistent with this Project Agreement.

4.6. Project Managers

4.6.1. Appointment: The Parties hereby appoint, designate, and authorize LADWP personnel to be the assigned project managers ("Project Managers" or "PMs") to organize and implement, with the support of the Project Director and the PMO, the Project Activities to be carried out in each of the four Project Areas. In this Project Agreement, where references to PMs are made under which the PMs take action or perform duties (including, without limitation and by way of example, conducting audits, releasing requests for proposals (RFPs), evaluating potential contracts and like matters), it shall be understood that LADWP as a Party is actually taking such actions, and that the PMs are not to be considered separate legal entities from LADWP.

Smart Grid Demonstration Project Agreement

4.6.2. Designated Project Managers: Upon the Effective Date of this Project Agreement, the designated Project Managers shall be the following:

- 4.6.2.1. Demand Response: Aditya Sharma
- 4.6.2.2. Electric Vehicles: Peter Suterko
- 4.6.2.3. Cybersecurity: Matthew M. Lampe
- 4.6.2.4. Behavior Studies: Aditya Sharma

The LADWP may change the designated Project Managers upon written notice (including email) to the other Parties.

4.6.3. Duties and Responsibilities: Subject to the express limitations of this Project Agreement, the PMs are authorized to perform and arrange for the performance of Project Activities in their respective Project Areas. The duties and responsibilities of the PMs under this Project Agreement shall include but not be limited to:

- 4.6.3.1. PMs will ensure that tasks have been assigned to the personnel and entities working in each Project Area (the "Project Area Team"), and that the Project Area Teams are supported by experienced Project management staff, administrative support, and an experienced business architecture team. PMs will give direction to the Project Area Teams regarding timing and level of effort consistent with the approved Project Schedule and Project Budget.
- 4.6.3.2. Each PM will manage the reporting of their Project Area to the PMO, including but not limited to milestone, time, and status reporting.
- 4.6.3.3. Each PM will develop and submit to the PMO work breakdowns for their respective Project Area, Project Activities, Project cost estimates, schedule

Smart Grid Demonstration Project Agreement

and budget development, and arrangements for delivery of the Project Output.

- 4.6.3.4. PMs will track and manage Task Orders that are distributed to the Project Area teams by the PMO.
- 4.6.3.5. Provide to the PMO and the Executive Committee for review plans, cost estimates, and schedules which may affect the PMP, including without limitation significant equipment and related purchases to be acquired for the Project or for any Project Activity.
- 4.6.3.6. Provide information to the Project Area Team regarding the decisions and actions of the Executive Committee and the PMO.
- 4.6.3.7. Facilitate regular communication and schedule monthly meetings with the Research Project Leads and members of the Project Area Team as invited by the PM or suggested by the Research Project Leads. The PM will be responsible for distributing an agenda at least two (2) days prior to a meeting, unless the PM determines that time-sensitive circumstances exist which require a meeting with less notice.
- 4.6.3.8. Each PM will report directly to the Executive Committee and work with the Program Director throughout the stages of the PMP to ensure quality control and maintain effective Project scheduling and progress.
- 4.6.3.9. Prepare and deliver monthly status reports, including upcoming contracts, purchases, reports, or articles to the Program Director.

Smart Grid Demonstration Project Agreement

- 4.6.3.10. Ensure that the Project Area Teams are meeting the schedules, budgets, and reporting requirements related to Project Activities as authorized by the Executive Committee or the Program Director.
- 4.6.3.11. Report to the EC and the Program Director promptly whenever it is apparent that requirements may not be met or cannot be met, or as the PMs become aware of any risks or foreseeable problems related to the Project.
- 4.6.3.12. Develop and issue specifications, requests for proposals, or contracts, and subsequent administration and enforcement of these contracts within the scope of their respective Project Areas, with the assistance of the PMO.
- 4.6.3.13. Submit proposed Task Orders to the PMO for review and carry out appropriate purchases and requisitions for each Project Activity in their respective Project Areas.
- 4.6.3.14. Conduct such other functions and duties as may be assigned by the Executive Committee or the Program Director, but in any event in a manner consistent with this Project Agreement.

4.7. Research Project Leads

- 4.7.1. Appointment: The Parties hereby appoint, designate and authorize University personnel to be the technical and research project leads (“Research Project Leads” or “RPLs”) for each of the four Project Areas.
- 4.7.2. Designated Research Project Leads: Upon the Effective Date of this Project Agreement, the designated RPLs shall be the following:
 - 4.7.2.1. Demand Response: Rajit Gadh (UCLA) and Donald Paul (USC)

Smart Grid Demonstration Project Agreement

4.7.2.2. Electric Vehicles: Peter Chu (UCLA)

4.7.2.3. Cybersecurity: Kymie Tan (JPL)

4.7.2.4. Behavior Studies: Julie Albright (USC)

Each University may change their designated RPL after requesting a discussion of such change at the EC, and after such discussion, upon ten (10) business days' written notice (including email) to the PMO and the relevant PMs. The PMO will then notify all Parties of the change. The Demand Response Project Area has two co-RPLs, one from UCLA and one from USC.

4.7.3. Duties and Responsibilities: Subject to the express limitations of this Project Agreement, the Research Project Leads are authorized to perform and arrange for the performance of Project Activities in their respective Project Areas. The duties of the RPLs shall include but not be limited to:

4.7.3.1. Create and submit to the Project Manager for their respective Project Areas a detailed Task Plan including, among other items, Project Activities, Project cost estimates, schedule and budget development, and arrangements for delivery of the Project Output.

4.7.3.2. Prepare and submit to the Executive Committee for its review and approval proposed revisions to the Project Budget for Project Activity Costs identifying subject matter experts, personnel, equipment, and supplies to execute Project Activities.

4.7.3.3. In case of changes in personnel in Project Area Team within the scope of the RPLs, including without limitation retirement, illnesses, leaves of

Smart Grid Demonstration Project Agreement

absences and the like, making reasonable efforts to find replacement or substitute personnel to ensure Project continuity if feasible.

- 4.7.3.4. Identify technologies, systems management techniques, and best practices for the execution of the Project Activities.
- 4.7.3.5. Maintain regular communication with and provide updates to University staff.
- 4.7.3.6. Report monthly to PMs on status of Project tasks and budgets.
- 4.7.3.7. Submit Payment Requests, reporting documents, and procurement requests and proposed Task Orders to the PM.
- 4.7.3.8. Make efforts to ensure Project deliverables and requirements are delivered on time and within budget.
- 4.7.3.9. Inform the PM and PMO as the RPLs become aware of any risks or foreseeable problems related to the project.
- 4.7.3.10. Report to the PM and PMO promptly whenever it is apparent that requirements may not be met or cannot be met.
- 4.7.3.11. Submit to the appropriate PM for review and approval of media press releases and outreach activities, except for scientific and technical publications.
- 4.7.3.12. Conduct such other functions and duties as may be assigned to the RPLs by the PM, but in any event in a manner consistent with this Project Agreement.

Smart Grid Demonstration Project Agreement

5. ARTICLE 5: TASK ORDERS, BUDGET, AND SCHEDULE

5.1. Task Order Definition: Project Activities can only be conducted under a valid work authorization signed by LADWP and agreed to in writing by the Party or Parties that will be conducting such work (a "Task Order"). The Parties acknowledge that work by LADWP or LADWP's employees, contractors, subcontractors, or consultants for Smart Grid Grant purposes that is intended to qualify for matching funds under the Smart Grid Grant may be authorized by LADWP pursuant to LADWP's usual contracting processes, and does not require authorization through a Task Order or processing through this Project Agreement.

5.2. Task Order Development and Issuance: Proposed Task Orders are developed by the PMs and the PMO in collaboration with University and LADWP staff. The PM will authorize and submit the Task Order for potential issuance by the PMO. The PMO will assist the PM with Task Order administration and be exclusively responsible for Task Order issuance. The Executive Committee will review proposed Task Orders and proposed Task Order modifications. The PMO will issue Task Orders after such input as well as upon its own initiative with the approval of the relevant Program Manager(s), and may at its discretion for administrative purposes integrate proposed Task Orders together or divide activities into one or more Task Orders. After receipt of a proposed Task Order, if a Party chooses not to participate in that Task Order, the Party must notify its PM and the PMO within thirty (30) business days of the receipt of the Task Order, provide a statement of the reasons for such non-participation and propose, if feasible, an alternative method or approach to ensure that the relevant Project Activity continues.

Smart Grid Demonstration Project Agreement

5.3. No Guarantee of Task Order Issuance: The Parties agree and acknowledge that LADWP is under no obligation to issue any particular number or type of Task Order, or any Task Order whatsoever, under this Project Agreement. The Parties further acknowledge that the issuance of certain Task Orders or the entering into of contracts thereunder may under certain circumstances require prior approval from the LADWP Board of Water and Power Commissioners and potentially the Los Angeles City Council.

5.4. Task Order Smart Grid Grant Eligibility: It is the intent of the Parties that the Task Order system utilized in this Project Agreement provide a sufficient and qualifying basis for the receipt of Smart Grid Grant monies and that such system comply with all applicable DOE and federal laws, rules, regulations, and requirements (“Federal Grant Requirements”). If at any time, upon suggestion of a Party or upon the initiative of the Executive Committee, it is necessary or advisable to modify the Task Order system in order to comply with Federal Grant Requirements or to improve the efficient operation of the Project, the Program Director with authorization of the Executive Committee shall consult with the Universities and develop, at the Program Director’s discretion, modified Task Order guidelines in a reasonable timeframe which comply with such Federal Grant Requirements or which improve Project efficiency. After development of such modified Task Order guidelines, the Program Director will distribute those modified guidelines to the Parties, who will then utilize the modified guidelines. Notwithstanding the foregoing paragraph, LADWP in its discretion may issue Task Orders or work authorizations under the NASA-specific terms and conditions in Exhibit F that do not provide a sufficient and qualifying basis for the receipt of Smart Grid Grant monies, and such Task Orders or

Smart Grid Demonstration Project Agreement

work authorizations will be specifically identified as not intended to qualify for Smart Grid Grant monies.

5.4.1. Minimum Necessary Information in Task Orders:

5.4.1.1. The following represents the minimum necessary information required to be included in a Task Order, unless modified Task Order guidelines are developed by the Program Director in accordance with Section 5.2, above.

5.4.1.2. Timelines and schedules for each Project Activity or sub-Project Activity that is the subject of the Task Order. Task Orders may contain discrete units of work that have specified outputs, timelines, and costs; or defined Project Activity goals and estimated levels of effort towards those goals; or other specific defined metrics regarding Project Activity goals; or Project Activity goals as completed on a percent basis (collectively, "Task Order Deliverables") which are specifically identified as Task Order Deliverables in the Task Order. The Parties understand, acknowledge, and agree that research and investigation activities cannot be guaranteed to result in particular outcomes, and will not necessarily be fully completed in any particular timeframe, and further that such circumstances will not hinder or bar payment for Task Order Deliverables.

5.4.1.3. Cost of the Project Activity, sub-Project Activity, and Task Order Deliverables, as applicable, that are the subject of the Task Order, including known applicable costs of materials, supplies, services, and equipment, as well as applicable overhead costs and labor loading charges, including but not limited to, if appropriate, time off allowances, payroll

Smart Grid Demonstration Project Agreement

taxes, workers' compensation insurance, retirement and death benefits, and other employee benefits.

5.4.1.4. Clear indication of whether American Recovery and Reinvestment Act (ARRA) funding is utilized and inclusion of associated reporting requirements.

5.4.1.5. Any other information as may be specified from time to time by the Program Director and approved by the EC.

5.5. Limit on Project Activity Costs. Total cumulative costs for all work under this Project Agreement, including all Project Activity Costs for all Project Areas, shall not exceed \$123,560,000 (the "Project Cost Limit").

5.6. LADWP Cost Limit. Total cumulative expenditures by LADWP of LADWP funds under this Project Agreement, including all Project Activity Costs for all Project Areas and expenditures of any kind, shall not exceed \$43,000,000 (the "LADWP Cost Limit"). LADWP is not required to and will not necessarily expend LADWP funds qualifying for Smart Grid Grant reimbursement under this Project Agreement, but may instead expend LADWP funds qualifying for Smart Grid Grant reimbursement through LADWP's usual contracting processes.

5.7. Project Budget. The Parties hereby approve the preliminary Project Budget as set forth in Exhibit B for Project Activity Costs. Any modification of such budget or any subsequently revised budget shall not exceed the Project Cost Limit, and in the case of LADWP, the LADWP Cost Limit, and each PM shall not exceed their budget allocation, if any. Any material proposed changes to the Project Budget will be subject to prior review by the Executive Committee. The PMO will create and release all

Smart Grid Demonstration Project Agreement

changes to the Project Budget, reporting the changes to all Parties within ten (10) business days. Revisions to the Project Budget are at LADWP's discretion. Any proposed modifications to the Project Budget which would exceed the Project Cost Limit or the LADWP Cost Limit must be approved through a properly executed Amendment to the Project Agreement.

5.8. Project Schedule. The Parties hereby approve the preliminary Project Schedule for Project Activities as set forth in Exhibit C hereto. Any material modification of such Project Schedule or any subsequently revised schedule shall be submitted to the EC for review by the PMO and the Program Director. Notice of changes to the Project Schedule will be provided by the PMO to the PMs and RPLs within five (5) business days of the change. Any proposed modifications to the Project Schedule which would increase the term of the Project Agreement must be approved through an executed Amendment to the Project Agreement.

5.9. Audits: Upon reasonable notice by LADWP, or at the request of the Federal Government at any time, LADWP shall conduct, or cause to be conducted by LADWP, an audit committee, an outside auditing firm or an individual, one or more interim audits of all Project Activity Costs expended to the date of the interim audit, including, if required or necessary, Project Activity Costs incurred prior to the Effective Date of this Agreement. Within thirty (30) days following completion of an interim audit, a report of audited costs expended under this Project Agreement to the date of the interim audit shall be submitted by the Project Director to all Parties. Such audits will be conducted as required or recommended in the DOE terms under which the Smart Grid Grant was awarded to LADWP (the "DOE Terms"), which are attached hereto as Exhibit A and

Smart Grid Demonstration Project Agreement

are made part of this Project Agreement, or pursuant to any federal law, rule, regulation, or standard, including without limitation OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations, or as otherwise reasonably specified by LADWP.

6. ARTICLE 6: PAYMENT OF PAYMENT REQUESTS

6.1. Payment of Payment Requests. After completion of a Task Order or Task Order Deliverable, the University or Universities participating in the Task Order shall submit evidence of completion and a payment request ("Payment Request") to the PMO. The PMO shall review the evidence and Payment Request, and will collaborate as necessary with the PMs, the RPLs, and other entities involved with the Task Order to verify completion of each particular Task Order and Task Order Deliverable. All payments will be made after certification of completion, and after verification that any other all requirements of this Project Agreement have been met, by the Project Director and PMO. The Parties acknowledge and agree that completion of a Task Order Deliverable does not necessarily mean the completion or achievement of a particular research result or invention, but rather represents the completion of a Task Order Deliverable as may be defined in a particular Task Order. Task Orders may specify that Payment Requests can be submitted by the Universities as individual Task Order Deliverables are completed, or alternatively only when Task Orders have been completed in their entirety. Payment will not be made by LADWP to a University unless and until DOE funds have been received by LADWP for such payment.

6.2. Payment Address. Each University shall send Payment Requests hereunder to the PMO, on behalf of the University, at the following address:

Smart Grid Demonstration Project Agreement

LADWP
Smart Grid Project Management Office
111 North Hope Street, Room 851
Los Angeles, CA 90012

- 6.3. PM Verification of Completion:** The relevant PMs shall conduct completion verification by reviewing the evidence of completion of Task Orders or Task Order Deliverables and the Payment Request, and reporting completion to the PMO.
- 6.4. Payment Request Formatting:** Payment Requests shall be submitted by each University to the LADWP in triplicate. The following information shall be included in each Payment Request submitted by the University to the PMO, unless otherwise specified in writing by the Program Director:
- 6.4.1.** University name, address, and vendor code number as registered on the LADWP vendor database.
 - 6.4.2.** City of Los Angeles Business Tax Registration Number.
 - 6.4.3.** Date of Payment Request.
 - 6.4.4.** Payment Request tracking number.
 - 6.4.5.** Contract number(s) or Task Order number(s).
 - 6.4.6.** Summary of individual Task Orders or Task Order Deliverables, including amount of current Payment Request, and total amount of Payment Request.
 - 6.4.7.** Description of services and Task Order Deliverables provided related to each individual Task Order and associated costs.
 - 6.4.8.** Basic billing details as may be specified by the DOE showing, without limitation, the separation of federal funds and non-federal funds.

Smart Grid Demonstration Project Agreement

- 6.4.9. Supporting documentation for costs and expenses, in a format meeting the requirements of the LADWP and the DOE Terms as specified by the Program Director. Major cost categories which require supporting documentation include: personnel (including salaries and benefits); equipment; travel; materials and supplies; publication costs; consultant services; subcontracts; other direct costs; and indirect costs.
- 6.4.10. The following certification statement signed by the University:
“I hereby certify that all expenditures reported (or payments requested) are for appropriate and lawful purposes consistent with the Project Agreement, and that the services rendered reflected in this payment request are true, accurate and in conformance with the terms of the Project Agreement.”
- 6.4.11. Approval signature blocks for the authorized LADWP representative.
- 6.5. Disputed Payment requests. If any portion of a Payment Request is disputed, the amount of the Payment Request not under dispute shall be paid by LADWP when due. LADWP shall investigate the facts and circumstances surrounding the dispute in a timely manner, make a determination in writing (the “Payment Request Determination”), and shall then pay any resulting amount due to (or collect any overpayment from) the particular Party to whom the payment is due or from whom any overpayment is to be collected. After the above process set forth in this paragraph, the relevant Party can request further review of LADWP’s Payment Request Determination through the dispute procedure set forth in Article 10.
- 6.6. Timely Invoicing. All charges related to the performance of the Party’s work or services for any Task Order or Task Order Deliverable, including subconsultant and other

Smart Grid Demonstration Project Agreement

reimbursable expenses, shall be payment requested by the relevant Party to the LADWP within six (6) months of the cost or expenses being incurred by the Party.

6.7. Completed Task Orders or Task Order Deliverable. Payment Requests should not be submitted by the Universities for payment until the relevant Task Order or Task Order Deliverable has been completed. The Parties acknowledge and agree that completion of a Task Order Deliverable does not necessarily mean that achievement of a particular result or outcome has been obtained.

6.8. Specific University Payment Procedures. Payment to the Universities will take place as set forth in this Project Agreement except as may be specified in individual University terms ("University Specific Terms"), which may include specific payment terms, and which are attached to this Project Agreement and made a part hereof as Exhibit D for UCLA and USC, and Exhibit F for NASA. Terms in the University Specific Terms, including Task Order procedures, Payment Request terms, payment terms, work authorizations, and other procedures and exceptions will govern and take precedence over conflicting provisions, if any, in this Project Agreement with respect to the relevant University.

6.9. Modification of Payment Procedures. If at any time, it is necessary or advisable in the opinion of LADWP to modify the payment procedures in this Article 6 to provide a sufficient and qualifying basis for the receipt of Smart Grid grant monies, to comply with Federal Grant Requirements or other law or regulation, or to significantly improve the efficiency of the payment procedures, the Program Director with the authorization of the EC shall develop such modified payment procedures, and distribute those modified payment procedures to the Parties, who will then utilize the modified procedures.

Smart Grid Demonstration Project Agreement

7. ARTICLE 7: INTELLECTUAL PROPERTY AND OTHER DOE GRANT TERMS

7.1. The Parties shall abide by the Smart Grid Regional Demonstration Project Allocation of Rights in Intellectual Property Agreement (the "Project IP Agreement") attached hereto to this Project Agreement as Exhibit E and made a part hereof. Although NASA is not a party to the Project IP Agreement, NASA agrees that all intellectual property matters relating to the Project Agreement will be exclusively determined by the terms of that Project IP Agreement, which has been agreed to by the California Institute of Technology (Caltech) which operates JPL, a Federally Funded Research and Development Center (FFRDC) managed by NASA. Nothing in this Project Agreement or the attached IP Agreement modifies the intellectual property rights afforded the U.S. Federal Government under the NASA/Caltech contract to operate JPL or the DOE Smart Grid award.

7.2. All Parties hereby acknowledge and agree that for any mandatory term or provision in the DOE Terms which necessarily conflicts with any term or provision in this Project Agreement, the term or provision in the DOE Terms shall govern, if legally applicable to each Party, or unless in the opinion of LADWP in writing to the other Parties such provision in the DOE Terms is inapplicable to particular circumstances which may arise from time to time under this Project Agreement.

8. ARTICLE 8: WARRANTY

8.1. WARRANTY: Subject to each University's charter, by-laws, standing orders, or other Federal or state rules, regulations, or laws, or other Board-approved or Regent-approved governing rules, laws, orders, codes, or regulations, to the fullest extent permitted by

Smart Grid Demonstration Project Agreement

law, the Universities warrant that activities and research conducted under this Project Agreement meet applicable standards of safety and performance, and that the research conducted and information generated has been conducted and compiled to the applicable standard of care for the professionals and universities conducting such research and preparing the reports.

9. ARTICLE 9: TERMINATION AND WITHDRAWAL

9.1. Termination. LADWP may terminate this Project Agreement upon sixty (60) days'

notice to the other Parties. The other Parties may not terminate this Project Agreement, but may withdraw from this Project Agreement as specified in Section 9.2 below.

9.2. Withdrawal. A University may withdraw from this Project Agreement upon sixty (60)

days' notice to the other Parties. Within thirty (30) days of the receipt of notice of a

University's intent to withdraw, the Executive Committee shall meet to discuss the withdrawal. The withdrawing University shall make a reasonable effort to propose a continuation plan, if feasible, to the EC regarding the University's withdrawal that does not negatively impact the Project and the withdrawing University's Project Activities.

Within ten (10) business days after any such withdrawal, the Program Director shall give formal written notification of such withdrawal to each non-withdrawing Party.

9.3. Voluntary Assumption of Project Activities. Any non-withdrawing Party may request to

assume all or some of the withdrawing University's Project Activities. At the sole discretion of the Project Manager and LADWP, the Program Director may instruct the PMO to issue Task Orders to the requesting Party or Parties to assume all or some of the withdrawing University's Project Activities.

Smart Grid Demonstration Project Agreement

- 9.4. Project Cost Obligation of Withdrawing University. A voluntarily withdrawing University shall be responsible for any necessary payments after withdrawal with respect to Project Costs that may be required under the DOE Terms. Upon notice of voluntary withdrawal, withdrawing University shall exert its reasonable efforts to limit or terminate any ongoing financial expenditures related to the Project. LADWP shall make reasonable efforts to obtain DOE reimbursement for the withdrawing Party for all costs incurred by it under this Project Agreement through the date of withdrawal, including without limitation, all uncancellable obligations, provided such costs are reimbursable by DOE under the DOE Terms.
- 9.5. Withdrawal from a Task Order not to Constitute Withdrawal from the Project. Unless a Party specifies otherwise, withdrawal from a particular Task Order does not constitute withdrawal from the Project.
- 9.6. Removal of Party from Project. All Parties agree and acknowledge that removal of a Party is a serious remedy that will not be undertaken except for a clear and ongoing material breach of this Project Agreement. If a Party other than LADWP maintains a clear and ongoing material breach of its obligations under this Project Agreement, LADWP is empowered, after two full and complete separate discussions of the matter with the Executive Committee, to provide notice of pending removal (a "Removal Notice") to the breaching Party. After a Removal Notice is received, the receiving Party will have ninety (90) days to cure such material breach (the "Cure Period") to the reasonable satisfaction of LADWP. If the receiving Party is able to cure such material breach, the Removal Notice will be void and of no further force and effect. If the receiving Party does not cure such material breach within the Cure Period, the receiving

Smart Grid Demonstration Project Agreement

Party is therefore withdrawn from the Project with the same force and effect as though the Party had voluntarily withdrawn from the Project under this Article 9.

9.7. Project Continuity. If all Parties other than LADWP have withdrawn or are removed pursuant to this Project Agreement, the Parties agree that LADWP may continue to participate in the DOE Smart Grid Grant, if LADWP is able to do so.

10. ARTICLE 10: DISPUTE RESOLUTION

In the event of any claim, controversy, or dispute between the Parties arising out of or relating to or in connection with this Project Agreement (a "Dispute"), the Parties will first attempt to have the Executive Committee resolve such Dispute pursuant to Section 4.3 of this Project Agreement. If the EC is unable to resolve the Dispute, any Party (the "Notifying Party") may deliver to the other Party (the "Recipient Party") notice of the Dispute with a detailed description of the underlying circumstances of such Dispute (the "Dispute Notice"). The Dispute Notice shall include a schedule of availability of the Notifying Party's senior officers duly authorized to resolve the Dispute during a thirty (30)-day period following the delivery of the Dispute Notice. The Recipient Party shall within seven (7) business days following receipt of the Dispute Notice, provide to the Notifying Party a parallel schedule of availability of the Recipient Party's senior officers duly authorized to resolve the Dispute. Following delivery of the parallel schedule of availability, the senior officers of the Parties shall meet and confer as often as they deem reasonably necessary during the remainder of the thirty (30)-day period to resolve the dispute to the satisfaction of each Party. In the event a Dispute is not resolved pursuant to the procedures set forth in this paragraph, then either Party may pursue any legal remedy available to it according to the terms of this Project Agreement, which shall include, in the case of claims against LADWP, following the

Smart Grid Demonstration Project Agreement

mandatory claims procedure set forth in Section 350 of the Los Angeles City Charter and Sections 5.169 and 5.170 of the Los Angeles Administrative Code.

11. ARTICLE 11: RECORDS

11.1. Records to be Kept. All significant determinations and reports made by the Program Director and PMO as required by this Project Agreement shall be set forth in a written record which shall be made available upon request to any Party or the Executive Committee. Such records shall be retained for a period of at least four (4) years from the date of termination of this Project Agreement. Records that are the subject matter of audits, appeals, litigation, or the settlement of claims arising out of the performance of this Project Agreement shall be retained for a minimum of five (5) years. Other recordkeeping guidelines can be promulgated from time to time by the Program Director.

12. ARTICLE 12: REPORTING

12.1. LADWP is responsible for compiling and submitting required reports to the DOE, unless otherwise specified by the Program Director or as may otherwise be required by DOE. LADWP is the registered user of the DOE report submission portal(s) and information acquired from the Universities will generally be included in the reports submitted. Report formats and rules regarding required data have been established by the DOE but are subject to change, and the Parties agree to provide such data to LADWP as may be required in a timely manner. LADWP will be responsible for tracking and conveying changes which affect the Universities' reporting requirements. The Universities shall, to the extent feasible, provide accurate and auditable data regarding Project Activities and research. The data are to be reported in Microsoft Word ("Word")

Smart Grid Demonstration Project Agreement

or Microsoft Excel (“Excel”) format or other formats as specified by the Program Director. A non-exhaustive number of anticipated reports are described below. Other reports may be required at any time as specified by the Program Director.

- 12.2.** The Parties anticipate that an ARRA Quarterly Progress Report (OMB) will be submitted on the Federal Reporting Template (v 1.6). Data in this report may include, but is not limited to: Jobs created/retained - primary and sub, direct; expenditures; major activities; project status; infrastructure work; place of performance; executive compensation; sub-recipient, vendor data.
- 12.3.** The Parties anticipate that a progress report (“Progress Report”) will be submitted monthly to DOE for the first 6 months of the project and then quarterly thereafter. Data in this report may include, but is not limited to: non-federal cost share, direct and indirect; goal attainment; major activities; significant project changes; problems or delays; products or technology transfers; project execution data; and risk management.
- 12.4.** Special status reports (“Special Status Reports”) are provided to DOE as necessary. The Special Status Reports can be triggered by recognition of major Project schedule slippage, cost overruns, or other significant negative events.
- 12.5.** The Parties anticipate that an SF-425 Federal Financial/Budget Report (“SF-425”) is reported quarterly to DOE. The SF-425 may contain, without limitation: information regarding transactions involving Federal cash, Federal expenditures, unobligated balance, recipient share, and program income.
- 12.6.** The Parties anticipate that a property certification report (“Property Certification”) will be provided to DOE that may include, without limitation: inventories

Smart Grid Demonstration Project Agreement

of non-exempt property equipment, supplies, and real property. The Property Certification is generally sent during the Project closing process.

12.7. An annual inventory of federally owned property (“Annual Inventory of Federally Owned Property”) is an inventory of non-exempt property that may be provided to DOE annually.

13. ARTICLE 13: AMENDMENTS

Any change to the terms of this Project Agreement, including without limitation any increase in the Project Cost Limit, the LADWP Cost Limit, or the Term of the Project Agreement must be agreed upon in a written Amendment to this Project Agreement signed by all Parties. All Parties agree and acknowledge that each Party may require a variety of internal approval processes that may be necessary before any Amendment can be approved, and each Party may withhold approval of any particular Amendment in the Party’s absolute discretion.

14. ARTICLE 14: LADWP BUSINESS POLICIES AND STANDARD TERMS

14.1. The Parties shall comply with LADWP business policies (“Business Policies”) in Exhibit G and LADWP’s standard terms and conditions in Exhibit H (“Standard Terms”) which are both attached to this Project Agreement and made a part hereof, unless specific exemptions are set forth in this Article 14, or are set forth for any particular Party in that Party’s University Specific Terms.

The following exceptions to Exhibit H apply:

a) SP-18 (Insurance). NASA is expressly acknowledged to be self-insured and the requirements of SP-18 are not applicable.

14.2. Flow Down Requirement. To the extent the Universities are legally able to do so, and unless otherwise specified in a particular Task Order, where LADWP funds are

Smart Grid Demonstration Project Agreement

expended, the Universities agree to flow down and obligate contractors, subcontractors, individuals, or entities to follow the terms of this Project Agreement, LADWP's Business Policies, and LADWP's Standard Terms, with the exceptions as taken in this Project Agreement.

15. ARTICLE 15: LIMITATION OF LIABILITY AND INDEMNITY

15.1. Limitation of Liability: a) Except for the mutual and proportional indemnity set forth in Exhibit H, each University's liability to the LADWP, of any type or nature whatsoever is limited to the total funds provided or conveyed to such University by LADWP, irrespective of the source of such funds, whether from LADWP, DOE, or any other entity under this Agreement.

b) Except for the mutual and proportional indemnity set forth in Exhibit H, LADWP's liability is limited to that allowed under Section 15.2, below.

15.2. Extent of Limitation of Liability; Enforcement of Rights. The limitation of liability in paragraph 15.1 shall not prohibit a Party from protecting and enforcing the Party's rights under this Project Agreement from a suit or suits in equity for specific performance of, or for a declaratory action with respect to, any obligations or duty of another Party, and each Party shall at all times retain the right to recover, by appropriate legal proceedings, any amount determined to be an overpayment or underpayment by another Party in relation to this Project Agreement, subject to the dispute procedure set forth in Article 10.

15.3. DOE Terms Flow Down Acknowledgement. The Parties agree and acknowledge that any provision or term in the DOE Terms which is required by federal law or regulation to be "flowed down" to Parties, contractors, and subcontractors will be

Smart Grid Demonstration Project Agreement

appropriately flowed down to all Parties and by all Parties to any contractors, subcontractors, individuals, or entities engaged by the Parties in connection with this Project Agreement.

15.4. DOE Indemnity Pass Through. If LADWP is required to indemnify DOE or the federal government pursuant to the DOE Terms (including, without limitation, the provision entitled "Indemnity" in the portion of Exhibit A entitled "Special Terms and Conditions for Use in Most Grants and Cooperative Agreements"), to the extent the events giving rise to such indemnity are caused, or alleged or asserted to be caused by another Party or Parties besides LADWP and to the extent required under the mutual and proportional indemnity set forth in Exhibit H, such Party or Parties must provide such indemnity directly to the DOE or the federal government, as appropriate. In all cases, all Parties agree to provide reasonable assistance and cooperation to any other Party in discussions or negotiations that may arise with DOE with respect to the above-mentioned indemnity in the DOE Terms.

16. ARTICLE 16: GOVERNING LAW; VENUE.

This Project Agreement was made and entered into in the City of Los Angeles and shall be governed by, interpreted and enforced in accordance with the laws of the State of California, without regard to conflict of law principles. All litigation arising out of, or relating to this Project Agreement, shall be brought in a state or federal court in the County of Los Angeles in the State of California. The Parties irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of California and waive any defense of *forum non conveniens*.

Smart Grid Demonstration Project Agreement

17. ARTICLE 17: ENTIRE AGREEMENT; BINDING OBLIGATIONS.

This Project Agreement (including all Appendices and Exhibits) contains the entire understanding concerning the subject matter herein and supersedes and replaces any prior negotiations, discussions, or agreements between the Parties, or any of them, concerning that subject matter, whether written or oral, except as expressly provided herein. This Project Agreement is a fully integrated document. Each Party acknowledges that no other party, representative, or agent, has made any promise, representation, or warranty, express or implied, that is not expressly contained in this Project Agreement that induced the Party to sign this document. All of the obligations set forth in this Project Agreement shall bind the Parties and their successors and assigns.

18. ARTICLE 18: AUTHORIZED PARTY REPRESENTATIVES.

Each Party hereto shall designate an authorized representative who shall be authorized to act on its behalf with respect to those matters contained herein (each an "Authorized Party Representative"), which shall be the functions and responsibilities of such Authorized Party Representatives. Each Party may also designate an alternate who may act for the Authorized Party Representative. Within thirty (30) calendar days after execution of this Agreement, each Party shall notify the other Parties of the identity of its Authorized Party Representative, and alternate if designated, and shall promptly notify the other Party of any subsequent changes in such designation. The Authorized Party Representatives shall have no authority to alter, modify, or delete any of the provisions of this Agreement.

Smart Grid Demonstration Project Agreement

19. ARTICLE 19: NOTICES

Except as otherwise expressly set forth in this Project Agreement, all notices, requests, demands, consents, waivers, and other communications which are required under this Project Agreement shall be in writing and shall be deemed properly sent if delivered in person or sent by facsimile transmission, reliable overnight courier, or sent by registered or certified mail, postage prepaid to the Authorized Party Representatives of each Party. In addition to the foregoing, the Parties may agree in writing at any time to deliver notices, requests, demands, consents, waivers, and other communications through alternate methods, such as electronic mail.

20. ARTICLE 20: EXECUTION IN COUNTERPARTS; EFFECTIVE DATE

This Project Agreement may be executed in multiple counterparts, each of which shall constitute one and the same Project Agreement. The Effective Date of this Project Agreement is the date it is signed by the last signatory. Any signature page of this Project Agreement may be detached from any counterpart of this Project Agreement without impairing the legal effect of any signatures thereon, and may be attached to any counterpart of this Project Agreement identical in form thereto, except that said identical in form Project Agreement may have attached one or more signature pages.

21. ARTICLE 21: NONEXCLUSIVITY

This Project Agreement is not exclusive; accordingly, the Parties may enter into similar agreements for the same or similar purpose with other private or public entities, provided such similar agreements do not conflict with the Parties' obligations under this Project Agreement.

22. ARTICLE 22: NON-PUBLIC INFORMATION

Smart Grid Demonstration Project Agreement

Except as specifically set forth in the IP Agreement, the Parties do not anticipate that non-public information ("Non-Public Information") will be exchanged as a general matter between the Parties in the performance of this Project Agreement. Except as provided in the IP Agreement, if a Party wishes to disclose information that the Party considers Non-Public Information, the disclosing Party must request that the receiving Party agree in writing to the receipt of such Non-Public Information before providing such Non-Public Information. If a receiving Party in its discretion agrees in writing to receive Non-Public Information under this Agreement, the receiving Party must protect such Non-Public Information with at least the same standard of care that the receiving Party uses to protect its own Non-Public Information. Non-Public Information exchanged pursuant to the above procedure shall be labeled "Non-Public Information."

Notwithstanding the foregoing, Non-Public Information shall not include information which (i) is disclosed with the prior written consent of the originating Party, (ii) at the time of disclosure is within the public domain through no breach of this Project Agreement by any Party, (iii) has been known or independently developed by and is currently in the possession of a Party prior to disclosure hereunder, (iv) was or is acquired by a Party from a third party who did not to the receiving Party's knowledge breach an obligation of confidentiality by disclosing it to a Party, (v) is required to be disclosed to comply with any applicable law, order, regulation or ruling or other legal requirement, including but not limited to, oral questions, discovery requests, subpoenas, civil investigations or similar processes; provided, however, the receiving Party shall give the originating Party timely notice, if feasible, of any such disclosure pursuant to this subsection (v). The Parties recognize and acknowledge that various open records laws, including without limitation and by way of example, the Ralph M.

Smart Grid Demonstration Project Agreement

Brown Act (Cal. Gov't Code §54950 *et seq.*) may apply to one or more Parties under this Agreement.

23. ARTICLE 23: EXPORT CONTROL

USC and UCLA intend to conduct the work under this Project Agreement as fundamental research under applicable federal export regulations and thus prefer to receive no material from LADWP that is both technical data under applicable federal export regulations and to be treated as LADWP's Non-Public Information ("Export Controlled Proprietary Information"). To the extent that any such Export Controlled Proprietary Information is needed to conduct the research, the LADWP shall not provide any information that LADWP knows to be Export Controlled Proprietary Information to USC or UCLA until a reasonable plan for receipt of the Export Controlled Proprietary Information is developed between the receiving Party and LADWP. Prior to providing the receiving Party information that LADWP knows to be Export Controlled Proprietary Information, the LADWP shall contact the receiving Party's authorized representative (identified in Article 24) and they shall attempt to develop a plan for receipt of the Export Controlled Proprietary Information. If the parties are unable to develop an acceptable plan to both parties, the University reserves the right to not receive the Export Controlled Proprietary Information. The Parties acknowledge that the Project Area concerned with Cyber Security should be examined by the Parties as the Project Agreement progresses because there is a probability that portions of that Project Area may potentially concern or involve Export Controlled Proprietary Information.

24. ARTICLE 24: NOTICE

Smart Grid Demonstration Project Agreement

Whenever any notice is to be given hereunder, it shall be in writing (which notice may be effectuated by email if so specified for particular notices in this Project Agreement) and shall be deemed received, if delivered by courier on a business day, on the day delivered, or on the second business day following mailing, if sent by first-class certified or registered mail, postage prepaid, to the following addresses:

LADWP: The Los Angeles Department of Water & Power
Customer Service Division – Executive Office
111 N Hope St, Room 755
Los Angeles, CA 90012
Telephone: (213) 367-1935
Facsimile: (213) 367-2644
Attention: Maria Sharma, Contract Administrator
Attention: Alice Fung, Correspondence

NASA: NASA Management Office – JPL
4800 Oak Grove Drive, Mail Stop 180-802D
Pasadena, CA 91109
Telephone: (818) 354-4529
Facsimile: (818) 354-6051
Attention: Theresa Moulse, Contracting Officer

UCLA: The Regents of the University of California
Office of Contract & Grant Administration
11000 Kinross Avenue, Suite 102
Los Angeles, CA 90095-1406
Telephone: (310) 794-0165
Facsimile: (310) 943-1658
Attention: Kim Duiker, Contract & Grant Officer

USC: The University of Southern California
Department of Contracts and Grants
837 W. Downey Way, Room 303
Los Angeles, CA 90089-1147
Telephone: (213) 740-7762
Facsimile: (213) 740-6070
Attention: Sara L. Judd, Director

Smart Grid Demonstration Project Agreement


25. ARTICLE 25: RELATIONSHIP OF THE PARTIES

This Project Agreement shall not constitute, create, or in any way be interpreted as a partnership, joint venture, or formal business organization of any kind. This Project Agreement does not establish any relationship of principal or agent; and neither Party shall have any authority or power to accept on behalf of any other Party any offer, agreement, or contract, or to make, incur, contract, or create any claim, promise, guarantee, debt, obligation, expense of liability of any kind on behalf of or for the account of any other Party. The relationships, rights, obligations, and duties of the Parties to each other with respect to this Project Agreement shall only be as expressed in this Project Agreement. Further, nothing in this Article 25 alters, affects, or diminishes the rights, obligations, and duties of the Parties in this Project Agreement.

Smart Grid Demonstration Project Agreement

IN WITNESS WHEREOF, each Party has caused this Project Agreement to be executed by their duly authorized representatives below.

APPROVED AS TO FORM AND LEGALITY
CARMEN A. TRUTANICH, CITY ATTORNEY

MAY 12 2010
BY 
LONNIE ELDRIDGE
DEPUTY CITY ATTORNEY

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES BY
BOARD OF WATER AND POWER
COMMISSIONERS OF THE CITY OF
LOS ANGELES

By _____
Austin Beutner
General Manager

Date: _____

And: _____
Secretary

Date: _____, 2010
(Seal)

Attest: _____

UNIVERSITY OF SOUTHERN CALIFORNIA

By _____

Title _____

Date: _____, 2010

Attest: _____

THE REGENTS OF THE UNIVERSITY OF
CALIFORNIA, ON BEHALF OF ITS
LOS ANGELES CAMPUS

By _____

Title _____

Date: _____, 2010
(Seal)

Attest: _____

NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION ("NASA")

By _____

Title _____

Smart Grid Demonstration Project Agreement

IN WITNESS WHEREOF, each Party has caused this Project Agreement to be executed by their duly authorized representatives below.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES BY
BOARD OF WATER AND POWER
COMMISSIONERS OF THE CITY OF
LOS ANGELES

By _____
Austin Beutner
General Manager

Date: _____

And: _____
Secretary

Date: 5/5, 2010
(Seal)

Attest: _____

UNIVERSITY OF SOUTHERN CALIFORNIA

By Sara Judd
Sara Judd
Director
Department of Contracts & Grants

Title _____ 5/5/10

Date: _____, 2010

Attest: _____

THE REGENTS OF THE UNIVERSITY OF
CALIFORNIA, ON BEHALF OF ITS
LOS ANGELES CAMPUS

By _____

Date: _____, 2010
(Seal)

Attest: _____

Title _____
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION ("NASA")

By _____

Title _____

Smart Grid Demonstration Project Agreement

IN WITNESS WHEREOF, each Party has caused this Project Agreement to be executed by their duly authorized representatives below.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES BY
BOARD OF WATER AND POWER
COMMISSIONERS OF THE CITY OF
LOS ANGELES

By _____
Austin Beutner
General Manager

Date: _____

And: _____
Secretary

Date: _____, 2010
(Seal)

Attest: _____

UNIVERSITY OF SOUTHERN CALIFORNIA

By _____

Title _____

Date: 5/4, 2010

Attest: Martha Hansen

THE REGENTS OF THE UNIVERSITY OF
CALIFORNIA, ON BEHALF OF ITS
LOS ANGELES CAMPUS

By Xin Liu

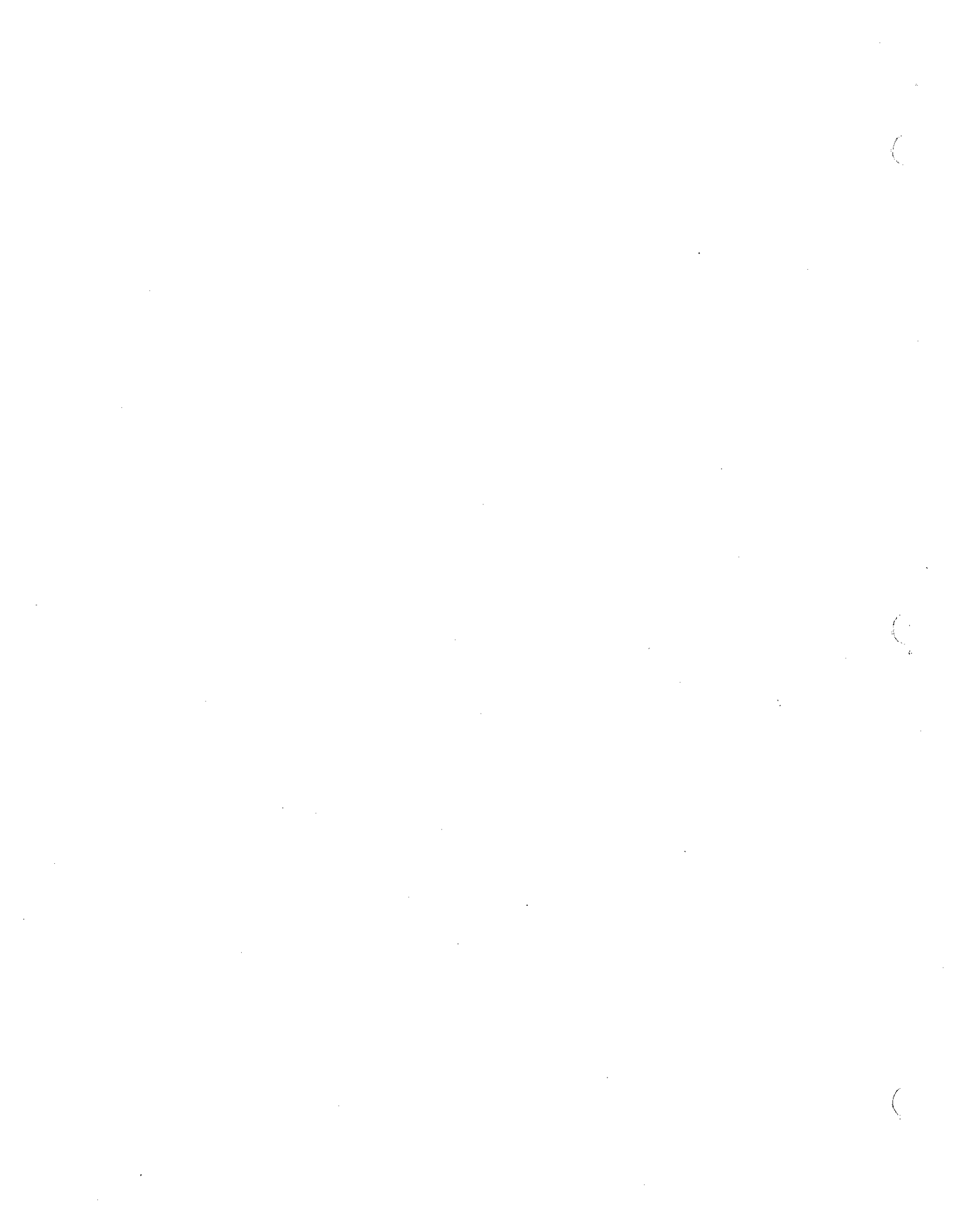
Title Contract and Grant Officer
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION ("NASA")

Date: _____, 2010
(Seal)

Attest: _____

By _____

Title _____



Smart Grid Demonstration Project Agreement

IN WITNESS WHEREOF, each Party has caused this Project Agreement to be executed by their duly authorized representatives below.

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES BY
BOARD OF WATER AND POWER
COMMISSIONERS OF THE CITY OF
LOS ANGELES

By _____
Austin Beutner
General Manager

Date: _____

And: _____
Secretary

Date: _____, 2010
(Seal)

Attest: _____

Date: _____, 2010

Attest: _____

Date: 05/03, 2010
(Seal)

Attest: _____

UNIVERSITY OF SOUTHERN CALIFORNIA

By _____
Title _____

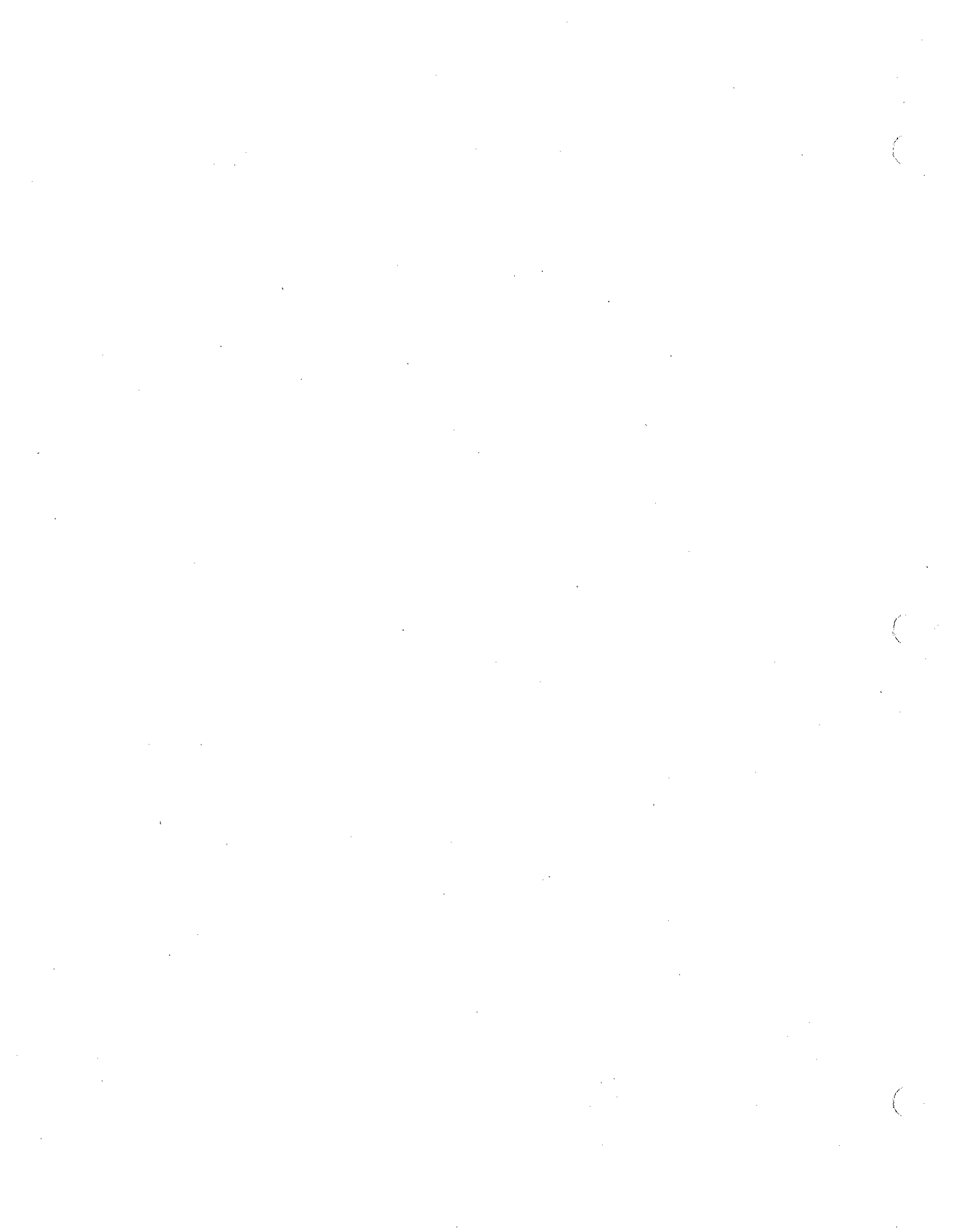
THE REGENTS OF THE UNIVERSITY OF
CALIFORNIA, ON BEHALF OF ITS
LOS ANGELES CAMPUS

By _____

Title _____
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION ("NASA")

By [Signature]

Title NMO Director



EXHIBITS LIST

EXHIBIT A: DOE TERMS

EXHIBIT B: PROJECT BUDGET

EXHIBIT C: PROJECT SCHEDULE

EXHIBIT D: ADDITIONAL TERMS AND CONDITIONS BETWEEN LADWP AND UCLA/USC

EXHIBIT E: INTELLECTUAL PROPERTY AGREEMENT

EXHIBIT F: ADDITIONAL TERMS AND CONDITIONS BETWEEN NASA AND LADWP

EXHIBIT G: LADWP BUSINESS POLICIES

EXHIBIT H: STANDARD PROVISIONS FOR LADWP

EXHIBIT A: DOE TERMS



SPECIAL TERMS AND CONDITIONS FOR USE IN MOST GRANTS AND COOPERATIVE AGREEMENTS..... 4
RESOLUTION OF CONFLICTING CONDITIONS..... 4
AWARD AGREEMENT TERMS AND CONDITIONS 4
CONDITIONS ON AWARD..... 4
PAYMENT PROCEDURES - REIMBURSEMENT THROUGH THE AUTOMATED CLEARING HOUSE (ACH) VENDER INQUIRY PAYMENT ELECTRONIC REPORTING SYSTEM (VIPERS)..... 5
COST SHARING 6
REBUDGETING AND RECOVERY OF INDIRECT COSTS - REIMBURSABLE INDIRECT COSTS AND FRINGE BENEFITS 6
USE OF PROGRAM INCOME - COST SHARING 7
STATEMENT OF FEDERAL STEWARDSHIP 7
STATEMENT OF SUBSTANTIAL INVOLVEMENT 7
SITE VISITS..... 8
REPORTING REQUIREMENTS 8
PUBLICATIONS..... 9
FEDERAL, STATE, AND MUNICIPAL REQUIREMENTS 9
INTELLECTUAL PROPERTY PROVISIONS AND CONTACT INFORMATION..... 9
LOBBYING RESTRICTIONS 10
NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS 10
INSOLVENCY, BANKRUPTCY OR RECEIVERSHIP 10
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS 10
ALTERNATE - NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS 11
DECONTAMINATION AND/OR DECOMMISSIONING (D & D) COSTS..... 12
PROPERTY 12
FINAL INCURRED COST AUDIT..... 12
INDEMNITY 12
ADVANCE PATENT WAIVER 12
SPECIAL PROVISIONS RELATING TO WORK FUNDED UNDER AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (Mar 2009) 13
REPORTING AND REGISTRATION REQUIREMENTS UNDER SECTION 1512 OF THE RECOVERY ACT..... 16
REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS (COVERED UNDER INTERNATIONAL AGREEMENTS)--SECTION 1605 OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009..... 16
WAGE RATE REQUIREMENTS UNDER SECTION 1606 OF THE RECOVERY ACT..... 19
RECOVERY ACT TRANSACTIONS LISTED IN SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS AND RECIPIENT RESPONSIBILITIES FOR INFORMING SUBRECIPIENTS..... 19
DAVIS BACON ACT AND CONTRACT WORK HOURS AND SAFETY STANDARDS ACT 20
RECIPIENT FUNCTIONS 27

SPECIAL TERMS AND CONDITIONS FOR USE IN MOST GRANTS AND COOPERATIVE AGREEMENTS

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 (to be incorporated upon definitization of Phase II)
- 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.
- 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.

c. Statement of Project Objectives

The Statement of Project Objectives (SOPO) contained in Recipient's application is incorporated into this award as the project SOPO. DOE and the Recipient agree that the SOPO 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 SOPO, 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 EPO 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 \$60,280,000 for completion of the project authorized by this award. However, only \$2,411,200 (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 \$2,411,200 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	DOE Share \$/%	Recipient Share \$/%	Total Estimated Cost
1	01/01/2010	*\$60,280,000/50%	*\$60,280,000/50%	*\$120,560,000
Total Project		*\$60,280,000/50%	*\$60,280,000/50%	*\$120,560,000

**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.

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.

NOTE: Subject to OMB approval pursuant to the Paperwork Reduction Act, DOE reserves the right to amend the reporting requirements to request more frequent and more detailed reporting.

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-OE0000192."

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.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

You are restricted from taking any action using Federal funds, which would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding this project. Prohibited actions include all activities with the exception of the Phase I activities identified in the Statement of Project Objectives, Attachment 2 to this award. This restriction does not preclude you from performing the Phase I Project Definition and NEPA Compliance activities specified in the Statement of Project Objectives.

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

If this award includes construction activities, you must submit an environmental evaluation report/evaluation notification form addressing NEPA issues prior to DOE/NNSA initiating the NEPA process.

ALTERNATE - NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

Applicable if DOE determines an Environmental Assessment or Environmental Impact Statement is Required for this award.

The Recipient is restricted from taking any action using Federal funds that would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE issuing a Finding of No Significant Impact (FONSI) for projects requiring an environmental assessment or a Record of Decision (ROD) for projects requiring an environmental impact statement. Prior to issuance of FONSI (or ROD if EIS becomes necessary), DOE will reimburse the Recipient up to [TBD] for project planning, design, and placement of long lead time equipment orders and Subtasks [TBD] identified in the SOPO at the DOE share ratio established in the award. Unless and until DOE issues a FONSI or ROD, all other costs incurred by the Recipient will be at the Recipient's risk. Prohibited actions include, but are not limited to, demolition/decontamination of existing buildings, site preparation/clearing, ground breaking, excavation/construction, and/or detailed design. However, activities necessary to perform site characterization/sampling/monitoring; preparation of conceptual design data/analysis/documentation to include project planning assistance/training, may be performed before a FONSI or ROD is issued.

In the event the Recipient elects to proceed with activities that could have an adverse impact on the environment prior to DOE issuing a FONSI or a ROD, the Recipient acknowledges that such activities are at Recipient's risk in that the DOE may not reimburse the cost depending on the outcome of the NEPA process.

Prior to the issuance of a FONSI or ROD, DOE agrees to discuss with the Recipient any proposed conditions and requirements that may be included in it if DOE decides to proceed with its proposed action. However, DOE retains sole discretion on whether to issue a FONSI or ROD and what conditions and requirements to include in it if one is issued.

If DOE decides to proceed with its proposed action subject to conditions, limitations, mitigation requirements, or monitoring requirements specified in a FONSI or ROD, the Recipient agrees to:

- a) abide by the conditions, limitations, mitigation requirements, and monitoring requirements specified in the FONSI or ROD;
- b) negotiate changes to the project schedule, costs, and/or scope as necessary to effect the requirements or conditions in the FONSI or ROD;
- c) allow DOE's authorized representatives to visit the site and facilities upon notice to verify project status and compliance to include conditions and requirements in the FONSI or ROD; and
- d) submit data or otherwise meet specified reporting requirements that may be in the FONSI or ROD.

If the Recipient finds the conditions and requirements to be unacceptable, the Recipient may terminate the award in accordance with 10 CFR 600.161(a)(3), 244(b), 351(a)(3), as applicable.

In the event DOE does not issue a NEPA determination supporting the project or the Recipient withdraws from the project as a result of mitigation requirements contained in DOE's NEPA determination, the maximum DOE liability to the Recipient is DOE's share of incurred costs up to [TBD], provided such costs are reasonable, allocable to the award, and allowable under the terms of the award and the applicable Federal cost principles. DOE reserves the right to unilaterally deobligate the balance of funds obligated, but not authorized for expenditure, in the event the foregoing NEPA requirements are not satisfied.

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 600.321.

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 make payment to DOE to extinguish DOE's conditional title to such property as described in 10 CFR 600.321., 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 10 CFR 600.321 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 10 CFR 600.321(f)(1)(i), 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.

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.

REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS (COVERED UNDER INTERNATIONAL AGREEMENTS)--SECTION 1605 OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

(a) Definitions. As used in this award term and condition--

Designated country --(1) A World Trade Organization Government Procurement Agreement country (Aruba, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom);

(2) A Free Trade Agreement (FTA) country (Australia, Bahrain, Canada, Chile, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Mexico, Morocco, Nicaragua, Oman, Peru, or Singapore); or

(3) A United States-European Communities Exchange of Letters (May 15, 1995) country: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and United Kingdom.

Designated country iron, steel, and/or manufactured goods --(1) Is wholly the growth, product, or manufacture of a designated country; or

(2) In the case of a manufactured good that consist in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different manufactured good distinct from the materials from which it was transformed.

Domestic iron, steel, and/or manufactured good --(1) Is wholly the growth, product, or manufacture of the United States; or

(2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed. There is no requirement with regard to the origin of components or subcomponents in manufactured goods or products, as long as the manufacture of the goods occurs in the United States.

Foreign iron, steel, and/or manufactured good means iron, steel and/or manufactured good that is not domestic or designated country iron, steel, and/or manufactured good.

Manufactured good means a good brought to the construction site for incorporation into the building or work that has been--

(1) Processed into a specific form and shape; or

(2) Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.

Public building and public work means a public building of, and a public work of, a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitation, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction, alteration, maintenance, or repair of such buildings and works.

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

(b) Iron, steel, and manufactured goods. (1) The award term and condition described in this section implements--

(i) Section 1605(a) of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111--5) (Recovery Act), by requiring that all iron, steel, and manufactured goods used in the project are produced in the United States; and

(ii) Section 1605(d), which requires application of the Buy American requirement in a manner consistent with U.S. obligations under international agreements. The restrictions of section 1605 of the Recovery Act do not apply to designated country iron, steel, and/or manufactured goods. The Buy American requirement in section 1605 shall not be applied where the iron, steel or manufactured goods used in the project are from a Party to an international agreement that obligates the recipient to treat the goods and services of that Party the same as domestic goods and services. This obligation shall only apply to projects with an estimated value of \$7,443,000 or more.

(2) The recipient shall use only domestic or designated country iron, steel, and manufactured goods in performing the work funded in whole or part with this award, except as provided in paragraphs (b)(3) and (b)(4) of this section.

(3) The requirement in paragraph (b)(2) of this section does not apply to the iron, steel, and manufactured goods listed by the Federal Government as follows:

_____NONE_____

(4) The award official may add other iron, steel, and manufactured goods to the list in paragraph (b)(3) of this section if the Federal Government determines that--

(i) The cost of domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, and/or manufactured goods used in the project is unreasonable when the cumulative cost of such material will increase the overall cost of the project by more than 25 percent;

(ii) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality; or

(iii) The application of the restriction of section 1605 of the Recovery Act would be inconsistent with the public interest.

(c) Request for determination of inapplicability of section 1605 of the Recovery Act or the Buy American Act. (1)(i) Any recipient request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b)(4) of this section shall include adequate information for Federal Government evaluation of the request, including--

(A) A description of the foreign and domestic iron, steel, and/or manufactured goods;

(B) Unit of measure;

(C) Quantity;

(D) Cost;

(E) Time of delivery or availability;

(F) Location of the project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(4) of this section.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this section.

(iii) The cost of iron, steel, or manufactured goods shall include all delivery costs to the construction site and any applicable duty.

(iv) Any recipient request for a determination submitted after Recovery Act funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the recipient could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the recipient does not submit a satisfactory explanation, the award official need not make a determination.

(2) If the Federal Government determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the Recovery Act applies, the award official will amend the award to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is nonavailability or public interest, the amended award shall reflect adjustment of the award amount, redistribution of budgeted funds, and/or other appropriate actions taken to cover costs associated with acquiring or using the foreign iron, steel, and/or relevant manufactured goods..

When the basis for the exception is the unreasonable cost of the domestic iron, steel, or manufactured goods, the award official shall adjust the award amount or redistribute budgeted funds, as appropriate, by at least the differential established in 2 CFR 176.110(a).

(3) Unless the Federal Government determines that an exception to section 1605 of the Recovery Act applies, use of foreign iron, steel, and/or manufactured goods other than designated country iron, steel, and/or manufactured goods is noncompliant with the applicable Act.

(d) Data. To permit evaluation of requests under paragraph (b) of this section based on unreasonable cost, the applicant shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Items Cost Comparison

Description	Unit of measure	Quantity	Cost
(dollars)*			
Item 1:			
Foreign steel, iron, or manufactured good	_____	_____	_____
Domestic steel, iron, or manufactured good	_____	_____	_____
Item 2:			
Foreign steel, iron, or manufactured good	_____	_____	_____
Domestic steel, iron, or manufactured good	_____	_____	_____

[List name, address, telephone number, email address, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[*Include all delivery costs to the construction site.]

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) 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.

CDLB-1003
Intellectual Property Provisions (CDLB-1003)
Cooperative Agreement - Special Data Statute
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 - Programs Covered Under Special Data Statutes (OCT 2003) |
| 04. FAR 52.227-23 | Rights to Proposal Data (Technical) (JUN 1987) |
| 05. 10 CFR 600.325
Appendix A | Patent Rights – (Large Business Firms - No Waiver) (OCT 2003)* |
| 06. 10 CFR 600.325
Appendix A | Protected Data |

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 600.325 Appendix A, Rights in Data - Programs Covered Under Special Data Statutes (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 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 confidential or privileged; or is published copyrighted computer software; including modifications of such computer software.

Protected data, as used in this clause, means technical data or commercial or financial data first produced in the performance of the award which, if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4) and which data is marked as being protected data by a party to the award.

Protected rights, as used in this clause, mean the rights in protected data set forth in the Protected Rights Notice of paragraph (g) of this clause.

Technical data, as used in this clause, means that data 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 whatsoever, and to have or permit others to do so.

(b) Allocation of Rights

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

- (i) Data specifically identified in this agreement as data to be delivered without restriction;
- (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 protected data in accordance with paragraph (g) of this clause or for limited rights data or restricted computer software in accordance with paragraph (h) of this clause.

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

- (i) Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;
- (ii) Withhold from delivery those data which are limited rights data or restricted computer software to the extent provided in paragraph (h) of this clause;
- (iii) Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) 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. Except as otherwise specifically provided in this agreement, the Recipient may establish, without the prior approval of the Contracting Officer, claim to copyright subsisting in any data first produced in the performance of this agreement. If claim to copyright is made, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment 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 to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government, for all such data.

(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 that are not first produced in the performance of this agreement and that contain 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 (h)(3) of this clause if included in this agreement or as otherwise may be provided in a collateral agreement incorporated or made a 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 Receipt 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 contract, 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 contract.

(2) The Recipient agrees that to the extent it receives or is given access to data necessary for the performance of this agreement 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)(1) or (h)(2) 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 subdivision (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 subdivision (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination become 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 there under.

(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) Rights to Protected Data

(1) The Recipient may, with the concurrence of DOE, claim and mark as protected data, any data first produced in the performance of this award that would have been treated as a trade secret if developed at private expense. Any such claimed "protected data" will be clearly marked with the following Protected Rights Notice, and will be treated in accordance with such Notice, subject to the provisions of paragraphs (e) and (f) of this clause.

PROTECTED RIGHTS NOTICE

These protected data were produced under agreement no. DE-OE0000192 with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until five (5) years from date of disclosure, unless express written authorization is obtained from the recipient. Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part.

(End of notice).

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:

(a) For evaluation purposes under the restriction that the "Protected Data" be retained in confidence and not be further disclosed; or

(b) To subcontractors or other team members performing work under the Government's Smart Grid Demonstration program of which this award is a part, for information or use in connection with the work performed under their activity, and under the restriction that the Protected Data be retained in confidence and not be further disclosed

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data.

(a) At the end of the protected period;

(b) If the data becomes publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;

(c) If the same data is independently developed by someone who did not have access to the Protected Data and such data is made available without obligations of confidentiality; or

(d) If the Recipient disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Recipient agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data. The parties agree that notwithstanding the following lists of types of data, nothing precludes the Government from seeking delivery of additional data in accordance with this award, or from making publicly available additional nonprotected data, nor does the following list constitute any admission by the Government that technical data not on the list is Protected Data.

In accordance with the CONDITIONS ON AWARD provision of this cooperative agreement, the listing of the minimum technical data deliverable with unlimited rights is subject to definitization within one-hundred twenty (120) days of award date.

(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).

(h) Protection of Limited Rights Data

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 such data qualify as either limited rights data or restricted computer software, the Recipient, if the Recipient desires to continue protection of such data, 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.

(i) 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 subaward/contract award without further authorization.

(j) 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.

(k) The Recipient agrees, except as may be otherwise specified in this agreement 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 contract, inspect at the Recipient's facility any data withheld pursuant to paragraph (h) 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 *none*, 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 26, 2009, upon which this contract is based.

05. 10 CFR 600.325 Appendix A, Patent Rights - (Large Business Firms - No Waiver) (OCT 2003)

(a) Definitions

DOE patent waiver regulations, as used in this clause, means the Department of Energy patent waiver regulations in effect on the date of award. See 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.).

Patent Counsel, as used in this clause, means the Department of Energy Patent Counsel assisting the awarding activity.

Subject invention, as used in this clause, means any invention of the Recipient conceived or first actually reduced to practice in the course of or under this agreement.

(b) Allocations of Principal Rights

(1) Assignment to the Government. The Recipient agrees to assign to the Government the entire right, title, and interest throughout the world in and to each subject invention, except to the extent that rights are retained by the Recipient under subparagraph (b)(2) and paragraph (d) of this clause.

(2) Greater rights determinations. The Recipient, or an employee-inventor after consultation with the Recipient, may request greater rights than the nonexclusive license and the foreign patent rights provided in paragraph (d) of this clause on identified inventions in accordance with the DOE patent waiver regulation. Each determination of greater rights under this agreement shall be subject to paragraph (c) of this clause, unless otherwise provided in the greater rights determination, and to the reservations and conditions deemed to be appropriate by the Secretary of Energy or designee.

(c) Minimum Rights Acquired by the Government

With respect to each subject invention to which the Department of Energy grants the Recipient principal or exclusive rights, the Recipient agrees to grant to the Government: A nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced each subject invention throughout the world by or on behalf of the Government of the United States (including any Government agency); "march-in rights" as set forth in 37 CFR 401.14(a)(J)); preference for U.S. industry as set forth in 37 CFR 401.14(a)(I); periodic reports upon request, no more frequently than annually, on the utilization or intent of utilization of a subject invention in a manner consistent with 35 U.S.C. 202(c)(5); and such Government rights in any instrument transferring rights in a subject invention.

(d) Minimum Rights to the Recipient

(1) The Recipient is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government obtains title, unless the Recipient fails to disclose the subject invention within the times specified in subparagraph (e)(2) of this clause. The Recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Recipient is a part and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of DOE except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Recipient may request the right to acquire patent rights to a subject invention in any foreign country where the Government has elected not to secure such rights, subject to the minimum rights acquired by the Government similar to paragraph (c) of this clause. Such request must be made in writing to the Patent Counsel as part of the disclosure required by subparagraph (e)(2) of this clause, with a copy to the DOE Contracting Officer. DOE approval, if given, will be based on a determination that this would best serve the national interest.

(e) Invention Identification, Disclosures, and Reports

(1) The Recipient shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Recipient personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this agreement. 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 Recipient shall furnish the Contracting Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(2) The Recipient shall disclose each subject invention to the DOE Patent Counsel with a copy to the Contracting Officer within 2 months after the inventor discloses it in writing to Recipient personnel responsible for patent matters or, if earlier, within 6 months after the Recipient becomes aware that a subject invention has been made, but in any event before any on sale, public use, or publication of such invention known to the Recipient. The disclosure to DOE shall be in the form of a written report and shall identify the agreement under which the invention was made and the inventor(s). 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 DOE, the Recipient shall promptly notify Patent Counsel of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient. The report should also include any request for a greater rights determination in accordance with subparagraph (b)(2) of this clause.

When an invention is disclosed to DOE under this paragraph, it shall be deemed to have been made in the manner specified in Sections (a)(1) and (a)(2) of 42 U.S.C. 5908, unless the Recipient contends in writing at the time the invention is disclosed that it was not so made.

(3) The Recipient shall furnish the Contracting Officer a final report, within 3 months after completion of the work listing all subject inventions or containing a statement that there were no such inventions, and listing all subawards/contracts at any tier containing a patent rights clause or containing a statement that there were no such subawards/contracts.

(4) The Recipient 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 Recipient each subject invention made under subaward/contract in order that the Recipient 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 subparagraph (e)(2) of this clause.

(5) The Recipient agrees, subject to FAR 27.302(j), that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause.

(f) Examination of Records Relating to Inventions

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

(i) Any such inventions are subject inventions;

(ii) The Recipient has established and maintains the procedures required by subparagraphs (e)(1) and (4) of this clause;

(iii) The Recipient and its inventors have complied with the procedures.

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

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(g) Subaward/Contract

(1) The recipient shall include the clause PATENT RIGHTS (SMALL BUSINESS FIRMS AND NONPROFIT ORGANIZATIONS) (suitably modified to identify the parties) in all subawards/contracts, regardless of tier, for experimental, developmental, demonstration, or research work to be performed by a small business firm or domestic nonprofit organization, except where the work of the subaward/contract is subject to an Exceptional Circumstances Determination by DOE. In all other subawards/contracts, regardless of tier, for experimental, developmental, demonstration, or research work, the Recipient shall include this clause (suitably modified to identify the parties), or an alternate clause as directed by the contracting officer. The Recipient shall not, as part of the consideration for awarding the subaward/contract, obtain rights in the subrecipient's/contractor's subject inventions.

(2) In the event of a refusal by a prospective subrecipient/contractor to accept such a clause the Recipient:

(i) Shall promptly submit a written notice to the Contracting Officer setting forth the subrecipient/contractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subaward/contract without the written authorization of the Contracting Officer.

(3) In the case of subawards/contracts at any tier, DOE, the subrecipient/contractor, and Recipient agree that the mutual obligations of the parties created by this clause constitute a contract between the subrecipient/contractor and DOE with respect to those matters covered by this clause.

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

(5) The Recipient shall identify all subject inventions of a subrecipient/contractor of which it acquires knowledge in the performance of this agreement and shall notify the Patent Counsel, with a copy to the contracting officer, promptly upon identification of the inventions.

(h) Atomic Energy

(1) No claim for pecuniary award of compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted with respect to any invention or discovery made or conceived in the course of or under this agreement.

(2) Except as otherwise authorized in writing by the Contracting Officer, the Recipient will obtain patent agreements to effectuate the provisions of subparagraph (h)(1) of this clause from all persons who perform any part of the work under this agreement, except nontechnical personnel, such as clerical employees and manual laborers.

(i) Publication

It is recognized that during the course of the work under this agreement, the Recipient 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 agreement. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the Recipient, patent approval for release of publication shall be secured from Patent Counsel prior to any such release or publication.

(j) Forfeiture of Rights in Unreported Subject Inventions

(1) The Recipient 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 Recipient fails to report to Patent Counsel within six months after the time the Recipient:

- (i) Files or causes to be filed a United States or foreign patent application thereon; or
- (ii) Submits the final report required by subparagraph (e)(3) of this clause, whichever is later.

(2) However, the Recipient shall not forfeit rights in a subject invention if, within the time specified in subparagraph (e)(2) of this clause, the Recipient:

(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 agreement and delivers the decision to Patent Counsel, with a copy to the Contracting Officer, or

(ii) Contending that the invention is not a subject invention, the Recipient nevertheless discloses the invention and all facts pertinent to this contention to the Patent Counsel, with a copy of the Contracting Officer; or

- (iii) Establishes that the failure to disclose did not result from the Recipient's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Secretary of Energy or designee to be forfeited (such determination to be a final decision under the Disputes clause of this agreement), the Recipient 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 (j) shall be in addition to and shall not supersede other rights and remedies which the Government may have with respect to subject inventions.

(End of clause)

06. PROTECTED DATA

The following is a listing of data anticipated to be generated under this award that the Recipient expects will qualify as "Protected Data," as that term is defined in the "Rights in Data" clause in this award. Incorporating this listing of data into this agreement does not constitute a guarantee by the Government that the data will in fact qualify for this designation.

In accordance with the CONDITIONS ON AWARD provision of this cooperative agreement, the listing of Protected Data is subject to definitization within one-hundred twenty (120) days of award date.

If a patent is issued by the United States Patent and Trademark Office or the patent office of any foreign country based on any information asserted to be Protected Data, the Government will no longer treat any data contained in such issued patent as Protected Data. In addition, if any information asserted to be Protected Data results in or becomes a Subject Invention, as that term is defined in the patent rights clause of this agreement, the Government will only treat such data as Protected Data until the Recipient has filed its initial patent application.



STATEMENT OF PROJECT OBJECTIVES

Recovery Act - LADWP Smart Grid Regional Demonstration Project in Collaboration with the LA Area University Consortium

December 2009

A. Project Objectives

The objective of this project is to support the goal of the Smart Grid Demonstration Funding Opportunity Announcement which is to demonstrate Smart Grid and Energy Storage technologies in regions across the States, Districts, and Territories of the United States of America that embody essential and salient characteristics of each region and present a suite of use cases for national implementation and replication. From these use cases, the goal is to collect and provide the optimal amount of information necessary for customers, distributors, and generators to change their behavior in a way that reduces system demands and costs, increases energy efficiency, optimally allocates and matches demand and resources to meet that demand, and increases the reliability of the grid. The social benefits of a smart grid and energy storage technologies are reduced emissions, lower costs, increased reliability, greater security and flexibility to accommodate new energy technologies, including renewable, intermittent and distributed sources.

B. Project Scope (Scope of Work)

The Scope of Work is in accordance with the Recipient's application submitted in response to the Smart Grid Demonstration Funding Opportunity Announcement. The Recipient shall only perform the following Phase I tasks. The remaining Phase II tasks are subject to definitization as specified in the Conditions on Award provision in the Special Terms and Conditions.

C. Tasks to be Performed

Phase I – Project Definition and NEPA Compliance

Task 1.0 – Update Project Management Plan (PMP)

The Recipient shall update the PMP submitted with their application. The updated PMP shall incorporate, at a minimum, sections J – M described below. The PMP shall be further updated upon definitization of Phase II, and subsequently with any major/significant project revisions.

- A. Executive Summary
- B. Risk Management
- 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. Data Analysis Plan
 - I.1 Project performance baseline
 - I.2 Cost and Benefit Analysis
 - I.3 Deployment of equipment, instrumentation and processes
 - I.4 Data collection, validation and analysis
- J. Resource Loaded Schedule - 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.
- K. Communications – establishing the appropriate exchange of Project information within the Project Management Team, internal organizational elements and to external stakeholders. 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.
- L. Project Monitoring, Change Control and Process Improvement – clearly showing 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 variances will be determined, evaluated and documented; (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.

M. Property Management – a 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.

Task 2.0 – National Environmental Protection Act (NEPA) Compliance

The Recipient shall prepare and provide required documentation for the DOE to make a NEPA determination. 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. 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 to Phase II.

Task 3.0 – Develop 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 upon definitization of Phase II, and subsequently with any major/significant project revisions.

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 Applicant, 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.

Phase II – TBD

The Statement of Project Objectives submitted with the application is hereby incorporated by reference as Phase II of the project and is subject to definitization as specified in the Conditions on Award provision in the Special Terms and Conditions.

D. Deliverables

The periodic and final reports shall be submitted in accordance with the instructions provided in the award document. In addition, the Recipient shall provide:

1. Project Management Plan (and updates) described in Task 1
2. Interoperability and Cyber Security Plan (and updates) as described in Task 3

E. Briefings and Technical Presentations

Annual detailed briefings will be presented 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 or as directed by the Project Officer. Additional briefings will be presented at least 30 days before completion of each Budget Period or as directed by the Project Officer. A final briefing will be presented at least 30 days prior to expiration of the Award.

This project is also subject to periodic DOE Peer Reviews, and a Reasonableness Review conducted by the DOE.

ATTACHMENT 3

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

1. Identification Number: DE-OE0000192	2. Program/Project Title: Recovery Act - LADWP Smart Grid Regional Demonstration Project in Collaboration with the LA Area University Consortium																	
3. Recipient: City of Los Angeles – Los Angeles Department of Water and Power																		
4. Reporting Requirements: A. MANAGEMENT REPORTING <input checked="" type="checkbox"/> Progress Report <input checked="" type="checkbox"/> Special Status Report	Frequency Q, F* 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															
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%; border: none;"> <tr> <td style="text-align: center;">Report/Product</td> <td style="text-align: center;">Form</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Final Scientific/Technical Report</td> <td style="text-align: center;">DOE F 241.3</td> <td style="text-align: center;">http://www.osti.gov/elink-2413</td> </tr> <tr> <td><input type="checkbox"/> Conference papers/proceedings*</td> <td style="text-align: center;">DOE F 241.3</td> <td style="text-align: center;">http://www.osti.gov/elink-2413</td> </tr> <tr> <td><input type="checkbox"/> Software/Manual</td> <td style="text-align: center;">DOE F 241.4</td> <td style="text-align: center;">http://www.osti.gov/estsc/241-4pre.jsp</td> </tr> <tr> <td><input type="checkbox"/> Other (see Special Instructions)</td> <td style="text-align: center;">DOE F 241.3</td> <td></td> </tr> </table> * Scientific and technical conferences only	Report/Product	Form		<input type="checkbox"/> Final Scientific/Technical Report	DOE F 241.3	http://www.osti.gov/elink-2413	<input type="checkbox"/> Conference papers/proceedings*	DOE F 241.3	http://www.osti.gov/elink-2413	<input type="checkbox"/> Software/Manual	DOE F 241.4	http://www.osti.gov/estsc/241-4pre.jsp	<input type="checkbox"/> Other (see Special Instructions)	DOE F 241.3				http://www.osti.gov/elink-2413 http://www.osti.gov/elink-2413 http://www.osti.gov/estsc/241-4pre.jsp
Report/Product	Form																	
<input type="checkbox"/> Final Scientific/Technical Report	DOE F 241.3	http://www.osti.gov/elink-2413																
<input type="checkbox"/> Conference papers/proceedings*	DOE F 241.3	http://www.osti.gov/elink-2413																
<input type="checkbox"/> Software/Manual	DOE F 241.4	http://www.osti.gov/estsc/241-4pre.jsp																
<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 type="checkbox"/> Other	A A		https://www.eere-pmc.energy.gov/SubmitReports.aspx															
F. AMERICAN RECOVERY AND REINVESTMENT ACT REPORTING <input checked="" type="checkbox"/> Reporting and Registration Requirements	A		http://www.federalreporting.gov															
FREQUENCY CODES AND DUE DATES: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">A - Within 5 calendar days after events or as specified.</td> <td style="width: 50%;">S - Semiannually; within 30 days after end of reporting period.</td> </tr> <tr> <td>F - Final; 90 calendar days after expiration or termination of the award.</td> <td>Q - Quarterly; within 30 days after end of the reporting period.</td> </tr> <tr> <td>Y - Yearly; 90 days after the end of the reporting period.</td> <td></td> </tr> </table>				A - Within 5 calendar days after events or as specified.	S - Semiannually; within 30 days after end of reporting period.	F - Final; 90 calendar days after expiration or termination of the award.	Q - Quarterly; within 30 days after end of the reporting period.	Y - Yearly; 90 days after the end of the reporting period.										
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Y - Yearly; 90 days after the end of the reporting period.																		
5. Special Instructions: Forms are available at https://www.eere-pmc.energy.gov/forms.aspx . *The Recipient shall submit a Final Progress 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 social 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.																		

Federal Assistance Reporting Instructions (5/09)

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. 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.
9. Actual or anticipated problems or delays and actions taken or planned to resolve them.
10. Any absence or changes of key personnel or changes in consortium/teaming arrangement.
11. 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. 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.

C. CLOSEOUT REPORTS

Final Invention and Patent Report

The recipient must provide a DOE Form 2050.11, "PATENT CERTIFICATION." This form is available at <http://www.directives.doe.gov/pdfs/forms/2050-11.pdf> and 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>

D. 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 DOE Administrator at the address listed in Block 16 of the Assistance Agreement Cover Page.

Annual Inventory of Federally Owned Property

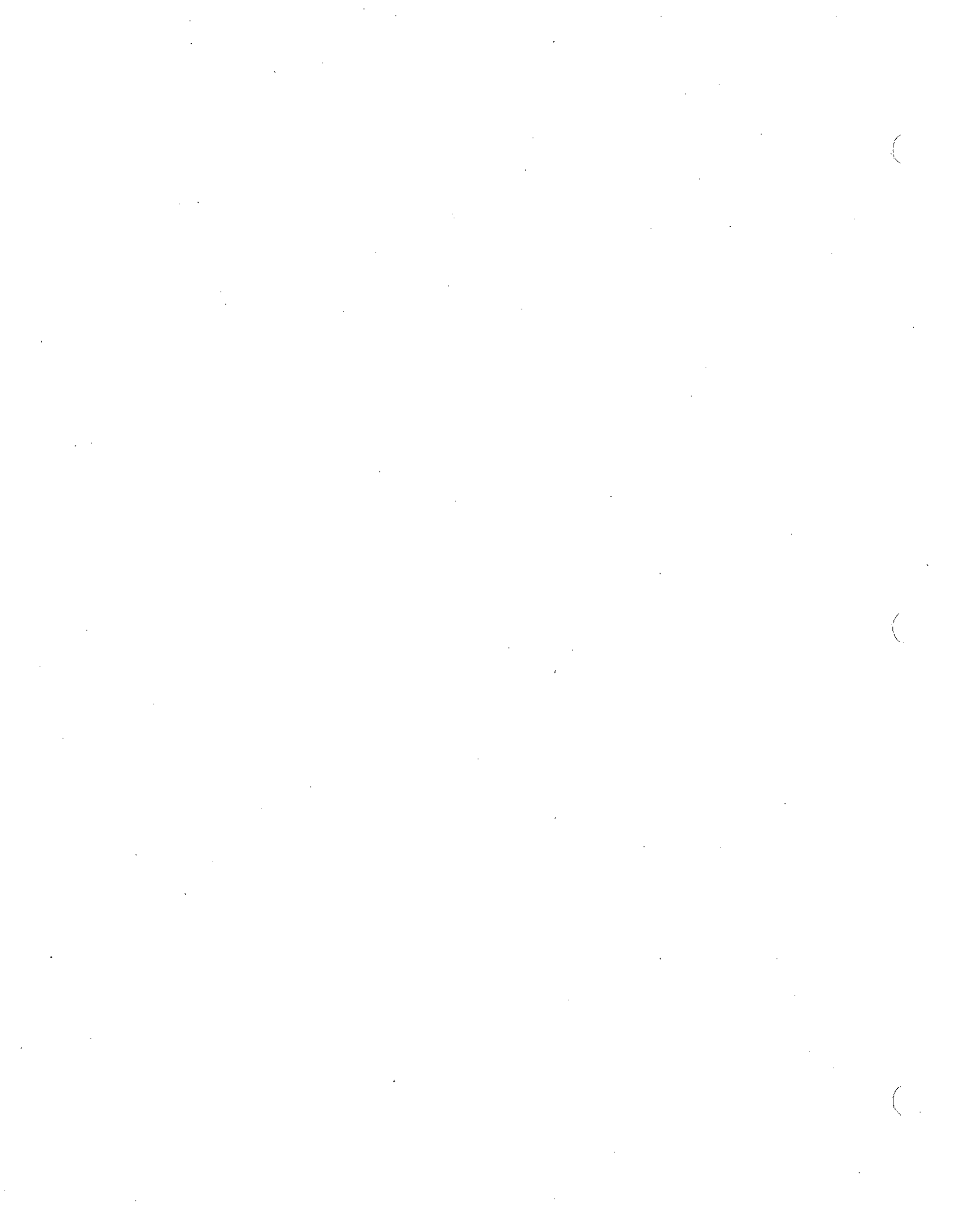
Requirement. If at any time during the award the recipient is provided Government-furnished property or acquires property with project funds and the award specifies that the property vests in the Federal Government (i.e. federally owned property), the recipient must submit an annual inventory of this property to the DOE Administrator at the address listed in Block 16 of the Assistance Agreement Cover Page. 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.

E. AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (RECOVERY ACT) REPORTING

Refer to the award term entitled, Reporting and Registration Requirements, of the Special Terms and Conditions for Grants and Cooperative Agreements for details on the reporting 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.



Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary						
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. B Period*	81.122			\$60,280,000	\$60,280,000	\$120,560,000
2.						
3.						
4.						
5. Totals				\$60,280,000	\$60,280,000	\$120,560,000
Section B - Budget Categories						
6. Object Class Categories	Grant Program, Function or Activity				Total (5)	
	(1) B Period*	(2)	(3)	(4)		
a. Personnel	\$52,910,000				\$52,910,000	
b. Fringe Benefits	\$0				\$0	
c. Travel	\$0				\$0	
d. Equipment	\$61,650,000				\$61,650,000	
e. Supplies	\$0				\$0	
f. Contractual	\$6,000,000				\$6,000,000	
g. Construction	\$0				\$0	
h. Other	\$0				\$0	
i. Total Direct Charges (sum of 6a-6h)	\$120,560,000				\$120,560,000	
j. Indirect Charges	\$0				\$0	
k. Totals (sum of 6i-6j)	\$120,560,000				\$120,560,000	
7. Program Income					\$0	

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

Section C - Non-Federal Resources					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) Totals	
8.	\$60,280,000			\$60,280,000	
9.					
10.					
11.					
12. Total (sum of lines 8 - 11)	\$60,280,000	\$0	\$0	\$60,280,000	
Section D - Forecasted Cash Needs					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	\$0				
14. Non-Federal	\$0				
15. Total (sum of lines 13 and 14)	\$0	\$0	\$0	\$0	\$0
Section E - Budget Estimates of Federal Funds Needed for Balance of the Project					
(a) Grant Program	Future Funding Periods (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16.					
17.					
18.					
19.					
20. Total (sum of lines 16-19)	\$0	\$0	\$0	\$0	
Section F - Other Budget Information					
21. Direct Charges		22. Indirect Charges			
23. Remarks					

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.

EXHIBIT B: PROJECT BUDGET

Estimated Program Costs

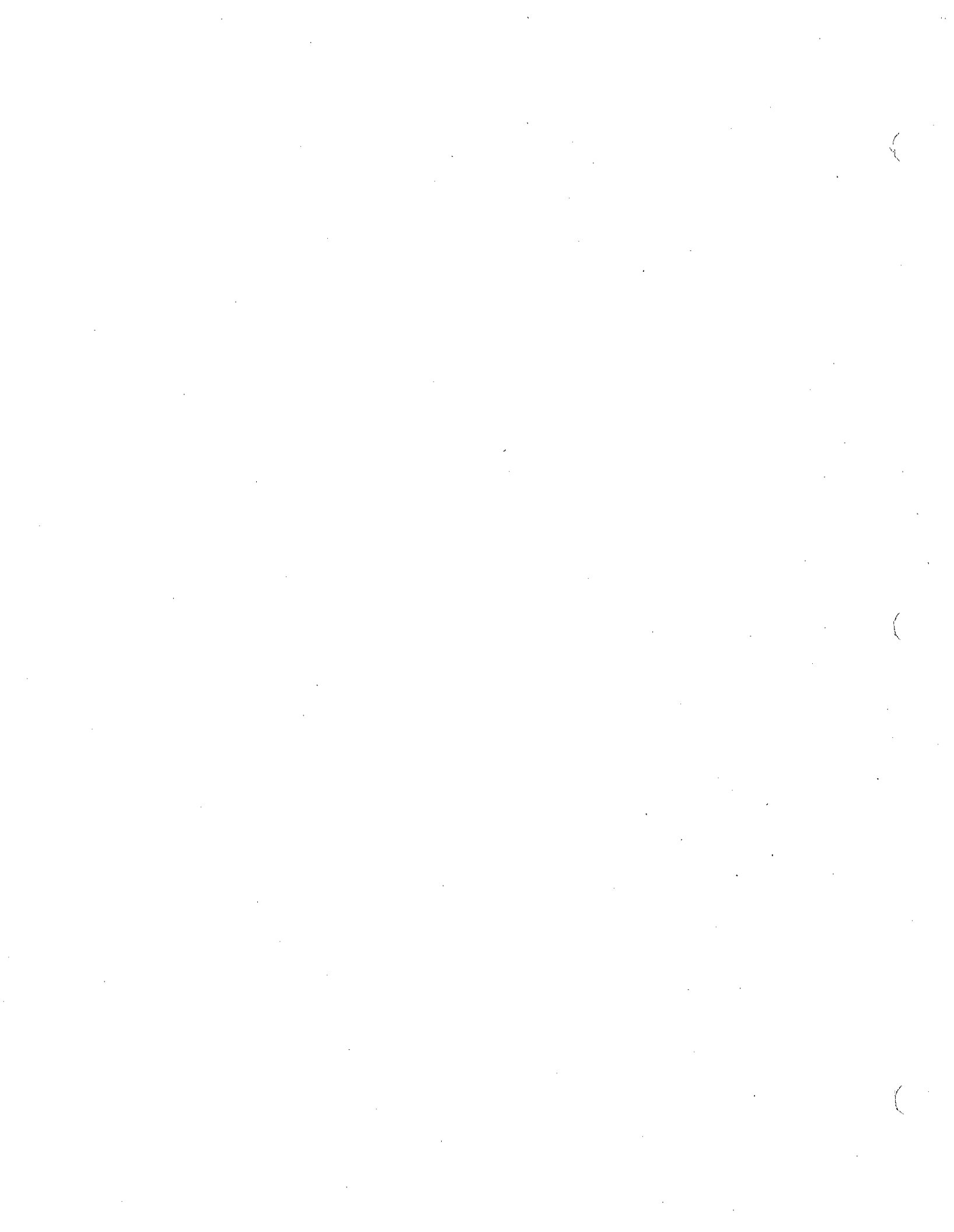
	2010	2011	2012	2013	2014	Total
LADWP	\$4.69	\$24.38	\$22.76	\$15.23	\$6.94	\$74.00
USC	\$2.03	\$3.29	\$5.36	\$3.26	\$6.06	\$20.00
UCLA	\$1.85	\$3.04	\$7.41	\$2.40	\$5.30	\$20.00
JPL	\$1.50	\$1.50	\$3.00	\$1.50	\$1.50	\$9.00
	\$10.07	\$32.21	\$38.53	\$22.39	\$19.80	\$123.00

PEPMO	Demand Response	Electric Vehicles	Cyber Security	Customer Behavior	Total
\$15	\$44	\$35	\$18	\$11	\$123

Numbers in \$M

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EXHIBIT C: PROJECT SCHEDULE



LADWP Smart Grid Regional Demonstration Program

ID	Task Name	Start	Finish	Resource Names	2010						2011
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1	Phase One: Setup PMO, program structure, plans	Fri 12/4/09	Fri 12/17/10		[Gantt bar spanning Qtr 4 2009 to Qtr 1 2010]						
2	Program strategy and planning	Fri 12/4/09	Tue 12/22/09		[Gantt bar spanning Fri 12/4/09 to Tue 12/22/09]						
3	Develop program planning matrix and high-level program plan for internal review	Fri 12/4/09	Fri 12/18/09	Professional Services 1[70%], Program Director[15%]	[Gantt bar spanning Fri 12/4/09 to Fri 12/18/09]						
4	Obtain internal alignment: High level plan, roles & responsibilities	Fri 12/4/09	Fri 12/18/09	Program Director & Sr. PMO staff[50%]	[Gantt bar spanning Fri 12/4/09 to Fri 12/18/09]						
5	Confirm internal alignment	Tue 12/22/09	Tue 12/22/09		[Gantt bar spanning Tue 12/22/09 to Tue 12/22/09]						
6	Establish organizational structure	Mon 1/4/10	Fri 12/17/10		[Gantt bar spanning Mon 1/4/10 to Fri 12/17/10]						
7	Smart Grid Executive Committee	Mon 1/4/10	Fri 1/8/10		[Gantt bar spanning Mon 1/4/10 to Fri 1/8/10]						
8	Program Steering Committee	Mon 1/4/10	Fri 1/8/10	Program Director[35%]	[Gantt bar spanning Mon 1/4/10 to Fri 1/8/10]						
9	Program Management Office (PMO)	Mon 1/4/10	Fri 12/17/10		[Gantt bar spanning Mon 1/4/10 to Fri 12/17/10]						
10	PMO Core Team (PSIT)	Mon 1/4/10	Fri 10/29/10		[Gantt bar spanning Mon 1/4/10 to Fri 10/29/10]						
11	Define roles & responsibilities	Mon 1/4/10	Fri 1/8/10	Engineer 1, Management Analyst 2	[Gantt bar spanning Mon 1/4/10 to Fri 1/8/10]						
12	Initial staffing: Existing LADWP personnel	Mon 1/11/10	Fri 1/22/10	Management Analyst 2, Program Director	[Gantt bar spanning Mon 1/11/10 to Fri 1/22/10]						
13	New LADWP personnel	Mon 1/11/10	Fri 10/29/10	Management Analyst 2[20%], Sr. Admin. Assistant[20%]	[Gantt bar spanning Mon 1/11/10 to Fri 10/29/10]						
14	Business Architecture Team (cross-functional)	Mon 1/25/10	Wed 2/3/10		[Gantt bar spanning Mon 1/25/10 to Wed 2/3/10]						
15	Define roles & responsibilities	Mon 1/25/10	Fri 1/29/10	Management Analyst 2, Professional Services 3	[Gantt bar spanning Mon 1/25/10 to Fri 1/29/10]						
16	Identify personnel required by functional area	Mon 2/1/10	Wed 2/3/10	Engineer 1[50%], Program Director[30%], Management Analyst 2	[Gantt bar spanning Mon 2/1/10 to Wed 2/3/10]						
17	Administrative Process (Billing, purchasing, hiring)	Mon 1/25/10	Tue 2/2/10		[Gantt bar spanning Mon 1/25/10 to Tue 2/2/10]						
18	Identify existing LADWP personnel	Mon 1/25/10	Tue 2/2/10	Management Analyst 2[35%], Professional Services 3	[Gantt bar spanning Mon 1/25/10 to Tue 2/2/10]						
19	Onboard external resources required	Thu 2/4/10	Wed 3/17/10	Management Analyst 2[35%], Professional Services 3	[Gantt bar spanning Thu 2/4/10 to Wed 3/17/10]						
20	Professional services supporting PMO start-up	Thu 3/18/10	Fri 12/17/10	Management Analyst 2[60%], Professional Services 3[125%]	[Gantt bar spanning Thu 3/18/10 to Fri 12/17/10]						
21	PMO training	Thu 3/25/10	Fri 9/3/10		[Gantt bar spanning Thu 3/25/10 to Fri 9/3/10]						
22	Determine training requirements	Thu 3/25/10	Wed 5/5/10	Management Analyst 2, Professional Services 1	[Gantt bar spanning Thu 3/25/10 to Wed 5/5/10]						
23	Initial staff training	Thu 5/6/10	Fri 9/3/10	Program Director[15%], Professional Services 2	[Gantt bar spanning Thu 5/6/10 to Fri 9/3/10]						
24	Project Teams	Mon 1/11/10	Fri 12/17/10		[Gantt bar spanning Mon 1/11/10 to Fri 12/17/10]						
25	Demand Response	Mon 1/11/10	Fri 12/17/10		[Gantt bar spanning Mon 1/11/10 to Fri 12/17/10]						
26	Define roles & responsibilities	Mon 1/11/10	Fri 2/19/10	USC Professor 2, USC Professor 3	[Gantt bar spanning Mon 1/11/10 to Fri 2/19/10]						
27	Identify existing LADWP personnel	Mon 2/22/10	Fri 2/26/10	LADWP Project Team Lead 1	[Gantt bar spanning Mon 2/22/10 to Fri 2/26/10]						
28	Onboard external resources required	Mon 3/8/10	Fri 4/16/10	LADWP Project Team Lead 1, USC Project Team Lead	[Gantt bar spanning Mon 3/8/10 to Fri 4/16/10]						
29	New LADWP personnel	Mon 2/22/10	Fri 11/19/10	LADWP Project Team Lead 1[10%]	[Gantt bar spanning Mon 2/22/10 to Fri 11/19/10]						
30	Professional services supporting Demand Response Team start-up	Mon 4/19/10	Fri 12/17/10	Professional Services 1, Professional Services 2	[Gantt bar spanning Mon 4/19/10 to Fri 12/17/10]						
31	University R&D positions	Mon 1/11/10	Fri 1/22/10		[Gantt bar spanning Mon 1/11/10 to Fri 1/22/10]						
32	Identify University personnel for R&D sub-team	Mon 1/11/10	Fri 1/22/10	USC Project Team Lead, LADWP Project Team Lead	[Gantt bar spanning Mon 1/11/10 to Fri 1/22/10]						
33	EV/PHEV aggregation & Smart charging	Mon 1/11/10	Fri 12/17/10		[Gantt bar spanning Mon 1/11/10 to Fri 12/17/10]						
34	Define roles & responsibilities	Mon 1/11/10	Fri 1/29/10	USC Professor 1, UCLA Professor 2	[Gantt bar spanning Mon 1/11/10 to Fri 1/29/10]						
35	Identify existing LADWP personnel	Mon 2/1/10	Fri 2/5/10	LADWP Project Team Lead 2	[Gantt bar spanning Mon 2/1/10 to Fri 2/5/10]						

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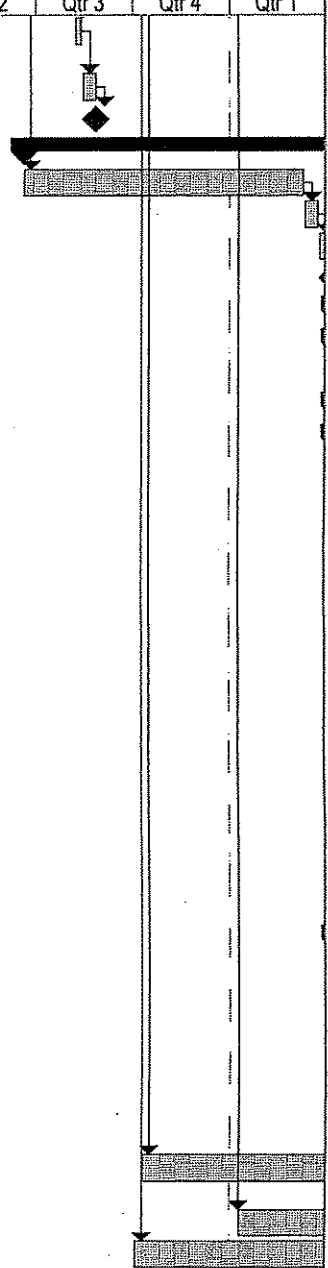
LADWP Smart Grid Regional Demonstration Program

ID	Task Name	Start	Finish	Resource Names	2010				2011	
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
36	Onboard external resources required	Mon 3/8/10	Fri 4/16/10	A Professor 1,UCLA Professor 2						
37	New LADWP personnel	Mon 2/1/10	Fri 10/29/10	DWP Project Team Lead 2[10%]						
38	Professional services supporting EV/PHEV Team start-up	Mon 4/19/10	Fri 12/17/10	Professional Services 1,Professional Services						
39	University R&D positions	Mon 1/11/10	Fri 1/22/10							
40	Identify University personnel for R&D sub-team	Mon 1/11/10	Fri 1/22/10	UCLA Project Team Lead,LADWP Project Team						
41	Customer behavioral studies & Cyber security (CB/CS)	Mon 1/11/10	Fri 12/17/10							
42	Define roles & responsibilities	Mon 1/11/10	Fri 1/29/10	SC Professor 1,USC Professor 2						
43	Identify existing LADWP personnel	Mon 2/1/10	Fri 2/5/10	LADWP Project Team Lead 3						
44	Onboard external resources required	Mon 3/8/10	Fri 4/16/10	ject Team Lead,USC Professor 1						
45	Professional services supporting CB/CS Team start-up	Mon 4/19/10	Fri 12/17/10	Professional Services 1,Professional Services 3[25%]						
46	New LADWP personnel	Mon 2/1/10	Fri 10/29/10	DWP Project Team Lead 3[10%]						
47	University R&D positions	Mon 1/11/10	Fri 1/22/10							
48	Identify University personnel for R&D sub-team	Mon 1/11/10	Fri 1/22/10	USC Project Team Lead,LADWP Project Team						
49	Program organizational structure established	Fri 10/29/10	Fri 10/29/10							
50	LADWP & DOE project award negotiations	Mon 12/14/09	Fri 4/16/10							
51	Award document received, reviewed, and signed by both LADWP and DOE	Mon 12/14/09	Fri 12/18/09							
52	Effective date of award (date award signed by DOE Contracting Officer)	Fri 12/18/09	Fri 12/18/09							
53	Develop ARRA report required by 01-10-09	Mon 12/14/09	Fri 1/8/10	%,Professional Services 1[20%]						
54	Review and refine Project Management Plan (PMP)	Mon 12/14/09	Fri 1/8/10	im Director & Sr. PMO staff[30%]						
55	Develop interoperability and cyber security plan and NEPA documentation	Mon 1/11/10	Fri 2/19/10	Program Director & Sr. PMO staff,LADWP Project Team Lead						
56	Develop performance metrics and reporting plan	Mon 2/22/10	Fri 4/16/10	im Director & Sr. PMO staff[20%]						
57	Develop cost and schedule performance metrics	Mon 1/11/10	Fri 3/5/10	im Director & Sr. PMO staff[40%]						
58	Determine LADWP systems for reporting Program metrics	Mon 3/8/10	Fri 4/2/10	Program Director & Sr. PMO staff[35%]						
59	Establish systems for reporting Program metrics	Mon 4/5/10	Mon 4/5/10							
60	Deliver quarterly reports	Mon 4/5/10	Fri 10/1/10	Management Analyst 3[30%]						
61	Develop detailed program and project plans	Mon 1/18/10	Fri 10/8/10							
62	Review and refine high-level program plan	Mon 4/5/10	Fri 4/16/10	im Director & Sr. PMO staff[65%]						
63	Develop detailed project plans for each demonstration project	Mon 4/19/10	Fri 6/18/10	PMO Core Team[30%],LADWP Project Team Lead						
64	Develop detailed Program plan	Mon 6/21/10	Fri 8/6/10	%,Management Analyst 4[50%]						
65	Develop public outreach and education plan	Mon 1/18/10	Fri 4/9/10	as 2,Professional Services 1[50%]						
66	Provide other LADWP services required for Program delivery	Mon 4/19/10	Fri 10/8/10	Management Analyst 2[50%],Management Analyst						

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LADWP Smart Grid Regional Demonstration Program

ID	Task Name	Start	Finish	Resource Names	2010				2011		
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
67	Detailed program plans: Internal review and approval	Mon 8/9/10	Fri 8/13/10	Program Director[50%]							
68	Detailed program plans: DOE review	Mon 8/16/10	Fri 8/27/10								
69	Detailed program plans: DOE approval	Fri 8/27/10	Fri 8/27/10								
70	Phase Two: Regional demonstration design	Mon 6/21/10	Fri 11/4/11								
71	Develop detailed preliminary design	Mon 6/21/10	Fri 3/11/11	or 1,UCLA Professor 1,UCLA P..							
72	Preliminary design: Internal review and approval	Mon 3/14/11	Fri 3/25/11	Program Director[50%]							
73	DOE preliminary design and NEPA review	Mon 3/28/11	Fri 4/8/11								
74	DOE Review: Go/No-Go decision	Fri 4/8/11	Fri 4/8/11								
75	Develop final design	Mon 4/11/11	Fri 9/23/11								
76	Overarching design supporting all initiatives	Mon 4/11/11	Fri 7/1/11								
77	Design Smart Grid integration architecture	Mon 4/11/11	Fri 7/1/11	rchr 1,Programmer 1,Program..							
78	Demand response	Mon 4/11/11	Fri 9/23/11								
84	EVs/PHEVs	Mon 4/11/11	Fri 9/23/11								
85	Design demonstration for EV integration	Mon 4/11/11	Fri 6/3/11	nal Services 1,Professional Serv.							
86	Design demonstration using car sharing programs at UCLA and USC	Mon 4/11/11	Fri 6/3/11	LADWP Project Team Lead 3,Engineer 2,USC Professor							
87	Design demonstration for a Community storage device	Mon 4/11/11	Fri 6/3/11	Engineer 4,Engineer 5,Programmer 2,USC Post Doc.							
88	Design for installation of WINSmartGrid technology in Evs	Mon 6/6/11	Fri 7/29/11	Engineer 5,Programmer 2,UCLA Project Team Lead,UCLA							
89	Design installation and integration of charging stations	Mon 6/6/11	Fri 7/29/11	Engineer 5,UCLA Project Team Lead,UCLA Professor 1,UCLA							
90	Design aggregation technology	Mon 8/1/11	Fri 9/23/11	Engineer 4,Engineer 5,Programmer 2,USC Post Doc.							
91	Sociological & behavioral studies	Mon 7/4/11	Fri 9/23/11								
92	Design survey instruments	Mon 7/4/11	Fri 8/26/11	Researcher 2,USC Post Doc. 3							
93	Select user interface applications to test	Mon 7/18/11	Fri 9/9/11	SC Professor 1,UCLA Professor 2							
94	Design implementation of ambient devices	Mon 7/18/11	Fri 9/23/11	r 1,UCLA Professor 2,Engineer 2							
95	Design field studies	Mon 7/18/11	Fri 9/16/11	Researcher 2,USC Post Doc. 1							
96	Next generation cyber security technologies	Mon 4/11/11	Fri 9/23/11								
97	Configure Counterpoint cyber security software	Mon 4/11/11	Fri 5/6/11	SC Professor 1,USC Professor 2							
98	Design to embed USC and JPL cyber security software tools in the integration architecture	Mon 5/9/11	Fri 6/17/11	LADWP Project Team Lead 3,Engineer 1,Programmer 3,JPL							
99	Design integration of Counterpoint with demonstration site systems	Mon 6/20/11	Fri 8/26/11	LADWP Project Team Lead 3,Engineer 1,Engineer							
100	Design cyber security cross domain analysis with PNNL	Mon 6/20/11	Fri 9/23/11	LADWP Project Team Lead 3[50%],Engineer 1,Engineer							
101	Provide other LADWP services required for Program delivery	Mon 10/11/10	Fri 11/4/11	Management Analyst 2[50%],Management Analyst							
102	Implement public outreach plan	Mon 1/10/11	Fri 11/4/11	1[50%],Programmer 1,Programmer 2							
103	Deliver quarterly reporting	Mon 10/4/10	Fri 10/28/11	1[50%],Professional Services 1[50%]							
104	DOE design review and NEPA compliance	Mon 9/26/11	Fri 11/4/11								



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LADWP Smart Grid Regional Demonstration Program

ID	Task Name	Start	Finish	Resource Names	2010					2011	
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
105	DOE Review: Go/No-Go decision for proceeding to Phase 3	Fri 11/4/11	Fri 11/4/11								
106	Phase Three: Construction	Mon 6/6/11	Fri 5/23/14								
107	Purchase equipment and software: Stage One	Mon 6/6/11	Fri 10/21/11								
108	Provide Program and Project Management for Stage 1 Construction Tasks	Mon 6/6/11	Fri 10/21/11	Program Director & Sr. PMO staff[50%],PMO Core							
109	Purchase demonstration equipment	Mon 6/6/11	Fri 10/21/11	es[75%],Smart Appliances[1,000							
110	Purchase demonstration software	Mon 6/6/11	Fri 10/21/11	ware[1],Studies Data Software[3]							
111	Purchase equipment and software: Stage Two	Mon 8/27/12	Fri 10/19/12								
112	Provide Program and Project Management for Stage 2 Construction Tasks	Mon 8/27/12	Fri 10/19/12	Program Director & Sr. PMO staff[50%],PMO Core							
113	Purchase demonstration equipment	Mon 8/27/12	Fri 10/19/12	es[75%],Smart Appliances[1,500							
114	Purchase demonstration software	Mon 8/27/12	Fri 10/19/12	ftware[1],DR Meters Software[1]							
115	Purchase equipment and software: Stage Three	Mon 9/2/13	Fri 10/25/13								
116	Provide Program and Project Management for Stage 3 Construction Tasks	Mon 9/2/13	Fri 10/25/13	Program Director & Sr. PMO staff[50%],PMO Core							
117	Purchase demonstration equipment	Mon 9/2/13	Fri 10/25/13	Sites[1],Smart Appliances[1,500							
118	Purchase demonstration software	Mon 9/2/13	Fri 10/25/13	ftware[1],DR Meters Software[1]							
119	Demand response initiative	Mon 10/24/11	Fri 5/23/14								
120	Purchase demand response meters, protocol devices, and smart appliances	Mon 10/24/11	Mon 10/24/11								
121	Purchase license for software for demand response	Mon 10/24/11	Mon 10/24/11								
122	Deploy equipment and software to demo sites	Tue 10/25/11	Mon 11/14/11	Facility Crews 1[200%],Facility Crews 2[200%],Facility Crews							
123	Install meters and software at demonstration sites' facilities	Tue 11/15/11	Mon 3/19/12	Construction Mechanic 1,Construction Mechanic							
124	Install AML infrastructure at demo sites' facilities	Tue 11/15/11	Mon 3/19/12	Construction Mechanic 11,Construction Mechanic							
125	Integrate AML and wireless control for variable speed motors with demo sites' facilities	Tue 3/20/12	Mon 9/17/12	PMO Core Team,Engineer 1,Engineer 2,Engineer							
126	Implement Open Source communications protocol and prototype HAN	Tue 3/20/12	Mon 7/23/12	LADWP Project Team Lead 1,USC Project Team Lead,USC							
127	Stage Two purchasing, deployment and installation	Mon 10/22/12	Fri 5/24/13	Facility Crews 1[20%],Facility Crews 2[20%],Facility Crews							
128	Stage Three purchasing, deployment and installation	Mon 10/28/13	Fri 5/23/14	: 5,Construction Mechanic 6[30%							
129	EVs/PHEVs	Mon 10/24/11	Fri 5/23/14								
130	Purchase charging stations	Mon 10/24/11	Mon 10/24/11								
131	Purchase License for software for charging stations	Mon 10/24/11	Mon 10/24/11								
132	Purchase Electric Vehicles	Mon 10/24/11	Mon 10/24/11								
133	Deploy equipment and software to demo sites	Tue 10/25/11	Mon 12/19/11	Facility Crews 1[200%],Facility Crews 2[200%],Facility Crews							
134	Outfit EVs with WINSmartGrid technology	Tue 12/20/11	Mon 5/7/12	3,UCLA Grad. Student 2,UCLA..							

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LADWP Smart Grid Regional Demonstration Program

ID	Task Name	Start	Finish	Resource Names	2010					2011	
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
135	Locate and integrate Community storage device	Tue 12/20/11	Mon 5/7/12	ervices 1,Professional Services 2							
136	Locate and integrate charging station installations	Tue 12/20/11	Mon 5/7/12	. 3,UCLA Grad. Student 2,USC ..							
137	Aggregate identified Evs	Tue 5/8/12	Mon 7/16/12	nt 4,Professional Services 1[60%							
138	Stage Two purchasing and deployment	Mon 10/22/12	Fri 5/17/13	Facility Crews 1,Facility Crews 2[25%]							
139	Stage Three purchasing and deployment	Mon 10/28/13	Fri 5/23/14	Facility Crews 1							
140	CB/CS	Mon 11/7/11	Fri 4/13/12								
141	Purchase software for data capture	Mon 11/7/11	Fri 12/16/11								
142	Purchase equipment for physical security	Mon 11/7/11	Fri 12/30/11								
143	Deploy equipment and software to demo sites	Mon 1/2/12	Fri 1/20/12	Facility Crews 1[27%]							
144	Install equipment and software at demonstration sites	Mon 1/23/12	Fri 4/13/12	Construction Mechanic 1[50%]							
145	Phase Four: Testing, Commissioning, Punch List	Mon 10/31/11	Mon 2/17/14								
146	Provide Program and Project Management for Testing, Commissioning Tasks	Mon 12/19/11	Fri 11/15/13	Program Director & Sr. PMO staff[10%],PMO Core							
147	Demand response initiative	Tue 7/24/12	Mon 11/25/13								
148	Integration test of AMI at demo sites facilities; Test feasibility and analysis of open source communications	Tue 9/18/12	Mon 1/21/13	PMO Core Team[25%],Engineer 3[25%],Engineer							
149	Test feasibility of real-time DR with wireless sensor control architecture	Tue 7/24/12	Mon 11/12/12	PMO Core Team,LADWP Project Team Lead							
150	Conduct analysis of Smart Appliances integration, and analysis of WINSmartGrid feasibility	Tue 7/24/12	Mon 11/26/12	LADWP Project Team Lead 1[50%],USC Project Team							
151	Post-installation study of wireless controls for variable speed motors; Integration test of AMI with existing facilities networks and control systems	Tue 9/18/12	Mon 3/4/13	PMO Core Team,Engineer 4,Programmer 3,Programmer 4,LADWP Project Team Lead							
152	Stage a demand response event using proxy performance models	Tue 3/5/13	Mon 5/27/13	PMO Core Team[40%],Engineer 4[50%],Programmer 3,LADWP							
153	Develop punch list of incomplete or unacceptable items and outcomes	Tue 1/22/13	Mon 5/27/13	PMO Core Team[50%],LADWP Project Team Lead 1[50%],USC							
154	Correct punch list deficiencies	Tue 5/28/13	Mon 11/25/13	nt 4,Programmer 4,Programmer 1							
155	EVs/PHEVs	Tue 5/8/12	Mon 12/2/13								
156	Test batteries and grid integration	Tue 5/8/12	Mon 7/30/12	am Lead[200%],UCLA Professo.							
157	Integration test of EVs and charging stations into the grid	Tue 7/31/12	Mon 10/22/12	PMO Core Team,Engineer 1,Engineer 2,Programmer 1,Programmer 2,UCLA Post							
158	Test Community storage device grid integration and feasibility analysis	Tue 5/8/12	Mon 12/3/12	Engineer 4,Engineer 5,Programmer 2,USC Post Doc.							
159	Conduct Smart Charging integration trial	Tue 12/4/12	Mon 6/3/13	PMO Core Team[40%],Engineer 4[50%],Programmer 3,USC							
160	Conduct analysis of aggregation of charged EV batteries	Tue 10/23/12	Mon 5/20/13	PMO Core Team,Engineer 1,Engineer 2,Programmer							
161	Develop punch list of incomplete or unacceptable items and outcomes	Tue 1/29/13	Mon 6/3/13	PMO Core Team[30%],Management							

LADWP Smart Grid Regional Demonstration Program

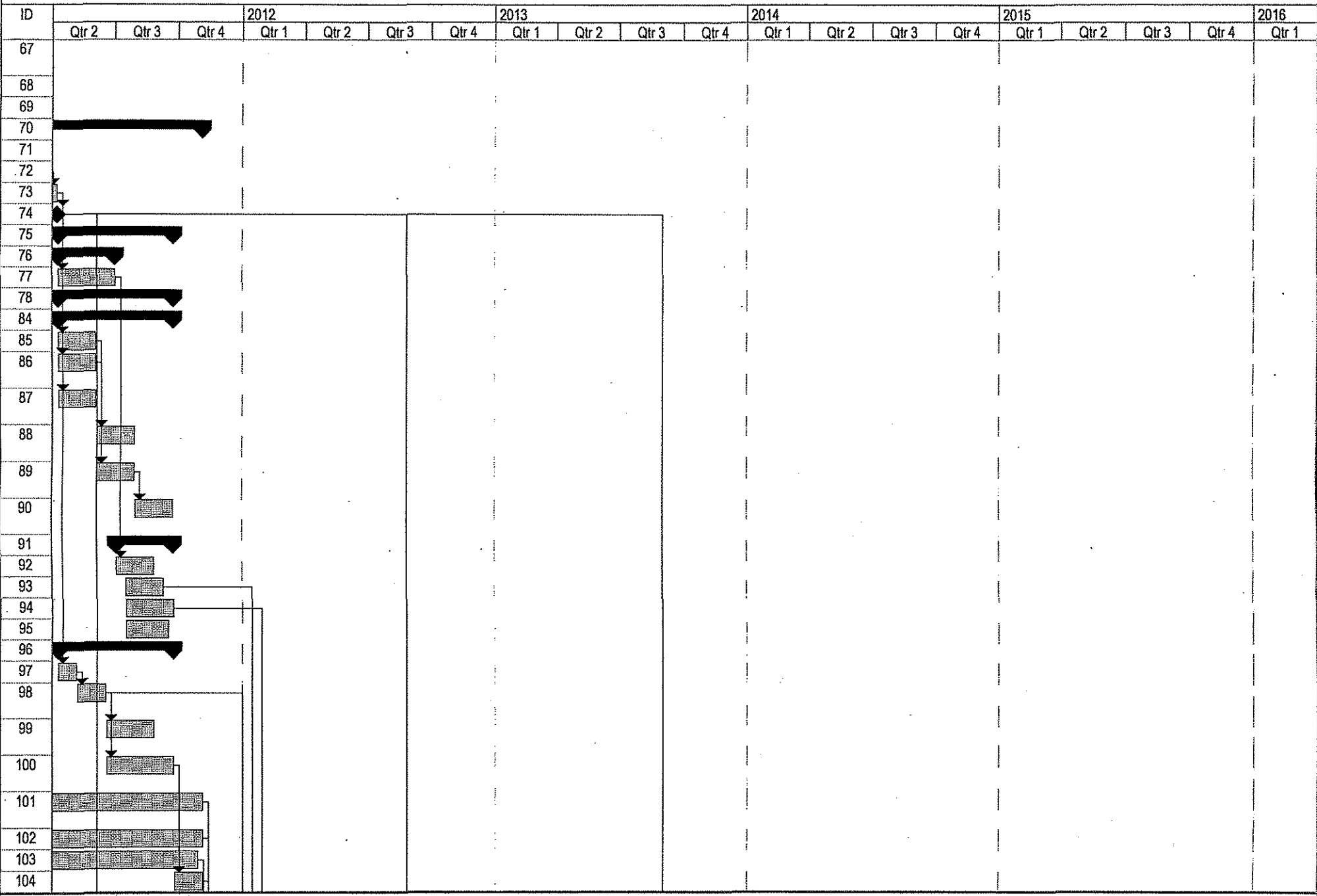
ID	Task Name	Start	Finish	Resource Names	2010						2011	
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
162	Correct punch list deficiencies	Tue 6/4/13	Mon 12/2/13	at 4,LADWP Project Team Lead ;								
163	Sociological & behavioral studies	Mon 12/19/11	Mon 2/11/13									
164	Obtain approval for Human Subjects Research	Mon 12/19/11	Fri 2/10/12	er 2[50%],USC Post Doc. 1[50%								
165	Test data capture software	Mon 4/16/12	Fri 5/11/12	DWP Project Team Lead 3[20%								
166	Implement ambient devices and conduct trial	Mon 1/30/12	Fri 11/2/12	researcher 3,UCLA Researcher 4								
167	Integrate user interface applications and conduct trial	Mon 1/16/12	Fri 2/1/13	LADWP Project Team Lead 3[30%],Engineer								
168	Develop punch list of incomplete or unacceptable items and outcomes	Tue 5/8/12	Mon 9/24/12	PMO Core Team[30%],USC Project Team								
169	Correct punch list deficiencies	Tue 9/25/12	Mon 2/11/13	DWP Project Team Lead 3[60%								
170	Next generation cyber security technologies	Mon 1/2/12	Mon 1/6/14									
171	Embed cyber security software tools in the integration architecture	Mon 1/2/12	Fri 4/20/12	LADWP Project Team Lead 3,Engineer 1,Programmer 3,JPL								
172	Test the accuracy & usability of the cyber security software tools	Mon 4/23/12	Fri 11/16/12	LADWP Project Team Lead 3[30%],Engineer								
173	Conduct cyber security cross domain analysis test with PNNL	Mon 11/19/12	Fri 6/28/13	LADWP Project Team Lead 3[50%],Engineer 1,Engineer								
174	Develop punch list of incomplete or unacceptable items and outcomes	Tue 4/16/13	Mon 8/19/13	USC Grad. Student 1[30%],USC Post Doc. 1[20%],USC Project								
175	Correct punch list deficiencies	Tue 8/20/13	Mon 1/6/14	at 4,Programmer 4,Programmer 1								
176	Provide other LADWP services required for Program delivery	Mon 11/7/11	Mon 1/6/14	Management Analyst 2[50%],Management Analyst								
177	Continue implementing public outreach plan	Mon 11/7/11	Mon 1/6/14	1[50%],Programmer 1,Programmer 2								
178	Deliver quarterly reporting	Mon 10/31/11	Mon 1/6/14	1[50%],Professional Services 1[50%								
179	DOE operational readiness review	Tue 1/7/14	Mon 2/17/14	1[50%],Professional Services 3[50%								
180	DOE Review: Go/No-Go decision for proceeding to Phase 5	Mon 2/17/14	Mon 2/17/14									
181	Phase Five: Operations	Tue 1/7/14	Fri 1/2/15									
182	Determine if SG information architecture is adequately scalable	Tue 2/18/14	Fri 11/7/14	PMO Core Team[75%],Engineer 1[25%],LADWP Project Team								
183	Demand response initiative	Tue 2/18/14	Fri 11/7/14									
184	Determine how security and privacy mechanisms will integrate into HAN	Tue 2/18/14	Mon 5/26/14	LADWP Project Team Lead 1,USC Project Team Lead,USC								
185	Demonstrate demand response for residential benefits	Tue 5/27/14	Fri 11/7/14	PMO Core Team,LADWP Project Team Lead								
186	Demonstrate demand response for building energy management	Tue 5/27/14	Fri 11/7/14	PMO Core Team,Engineer 4,Programmer 3,LADWP Project								
187	Integration of EVs into LADWP grid	Tue 4/1/14	Fri 12/19/14									
188	Demonstrate smart charging	Tue 4/1/14	Fri 12/19/14	ier 1,UCLA Researcher 2,UCLA.								
189	Demonstrate the aggregation of charged EV batteries	Tue 4/1/14	Fri 12/19/14	PMO Core Team,Engineer 1,Engineer 2,Programmer								
190	Determine grid impact	Tue 4/1/14	Fri 12/19/14	Student 3,UCLA Grad. Student 4								
191	Sociological & behavioral studies	Tue 2/18/14	Fri 11/7/14									

This Project Schedule is subject to revision as per the terms of the Project Agreement.

LADWP Smart Grid Regional Demonstration Program

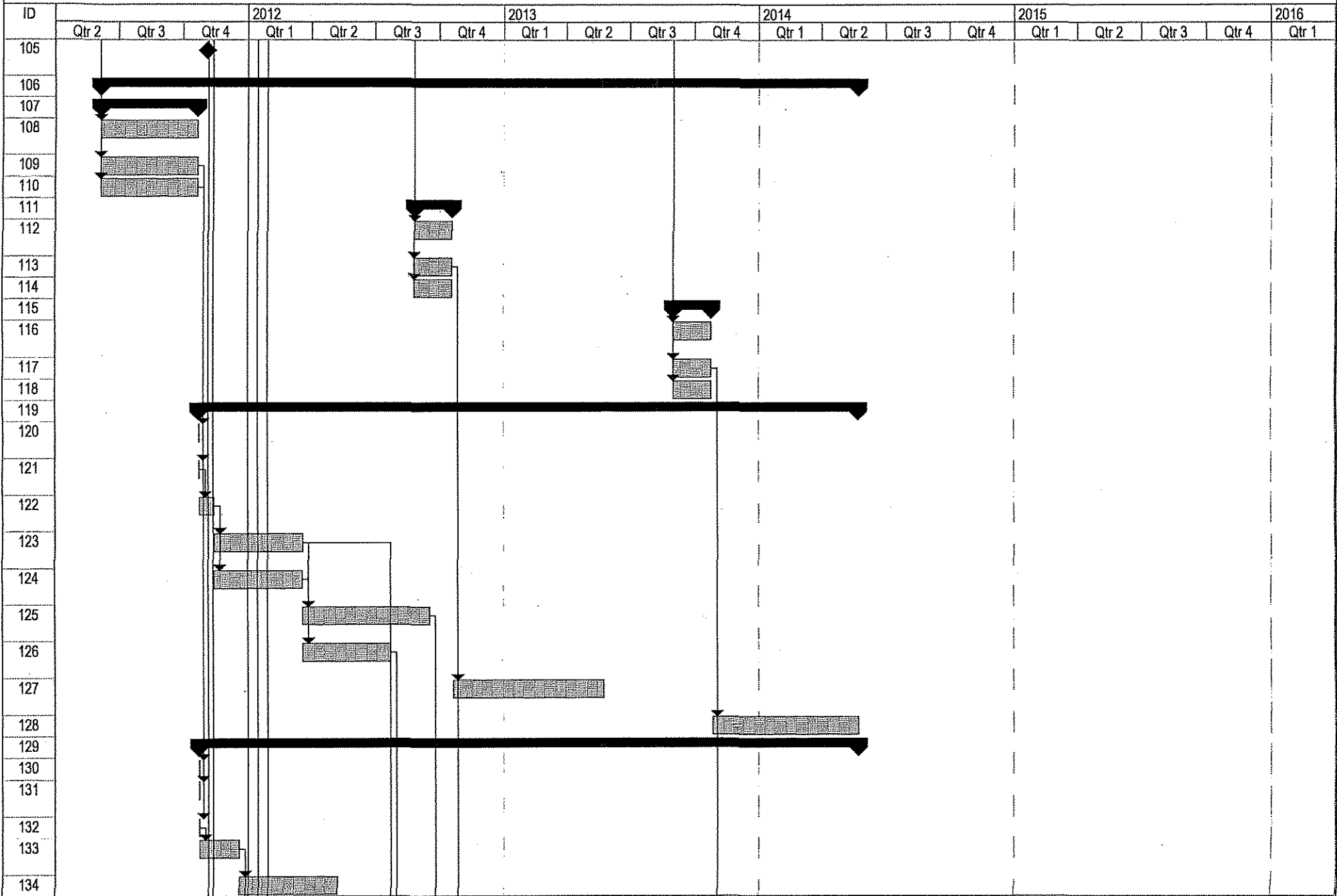
ID	Task Name	Start	Finish	Resource Names	2010				2011	
					Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
192	Monitor & reward energy conservation	Tue 2/18/14	Fri 11/7/14	Customer Service Rep 4, USC Proje..						
193	Conduct ongoing sociological and behavioral research	Tue 2/18/14	Fri 11/7/14	LADWP Project Team Lead 3, USC Project Team Lead, USC						
194	Conduct field study of Smart Meter use	Tue 2/18/14	Fri 11/7/14	LADWP Project Team Lead 3, USC Project Team Lead, USC						
195	Conduct field study of consumer participants	Tue 2/18/14	Fri 11/7/14	2[200%], USC Post Doc. 1[200%						
196	Next generation cyber security technologies	Tue 2/18/14	Fri 11/7/14							
197	Implement Cyber Security Cross Domain Analysis with PNNL	Tue 2/18/14	Fri 11/7/14	LADWP Project Team Lead 3[30%], Engineer						
198	Provide other LADWP services required for Program delivery	Tue 1/7/14	Fri 8/8/14	Management Analyst 2[50%], Management Analyst						
199	Continue implementing public outreach and education plan	Tue 1/7/14	Fri 8/8/14	Management Analyst 2[50%], Management Analyst						
200	Deliver quarterly data reporting	Tue 1/7/14	Fri 8/15/14	Management Analyst 3[50%], Management Analyst						
201	Project closeout	Mon 12/1/14	Fri 1/2/15	Team Lead, JPL Project Team Lead						
202	Phase Six: Post-Demonstration Reporting & Communications	Mon 1/5/15	Thu 12/31/15							
203	Provide information regionally and nationally	Mon 1/5/15	Thu 12/31/15	Program Director[10%], Management						

LADWP Smart Grid Regional Demonstration Program

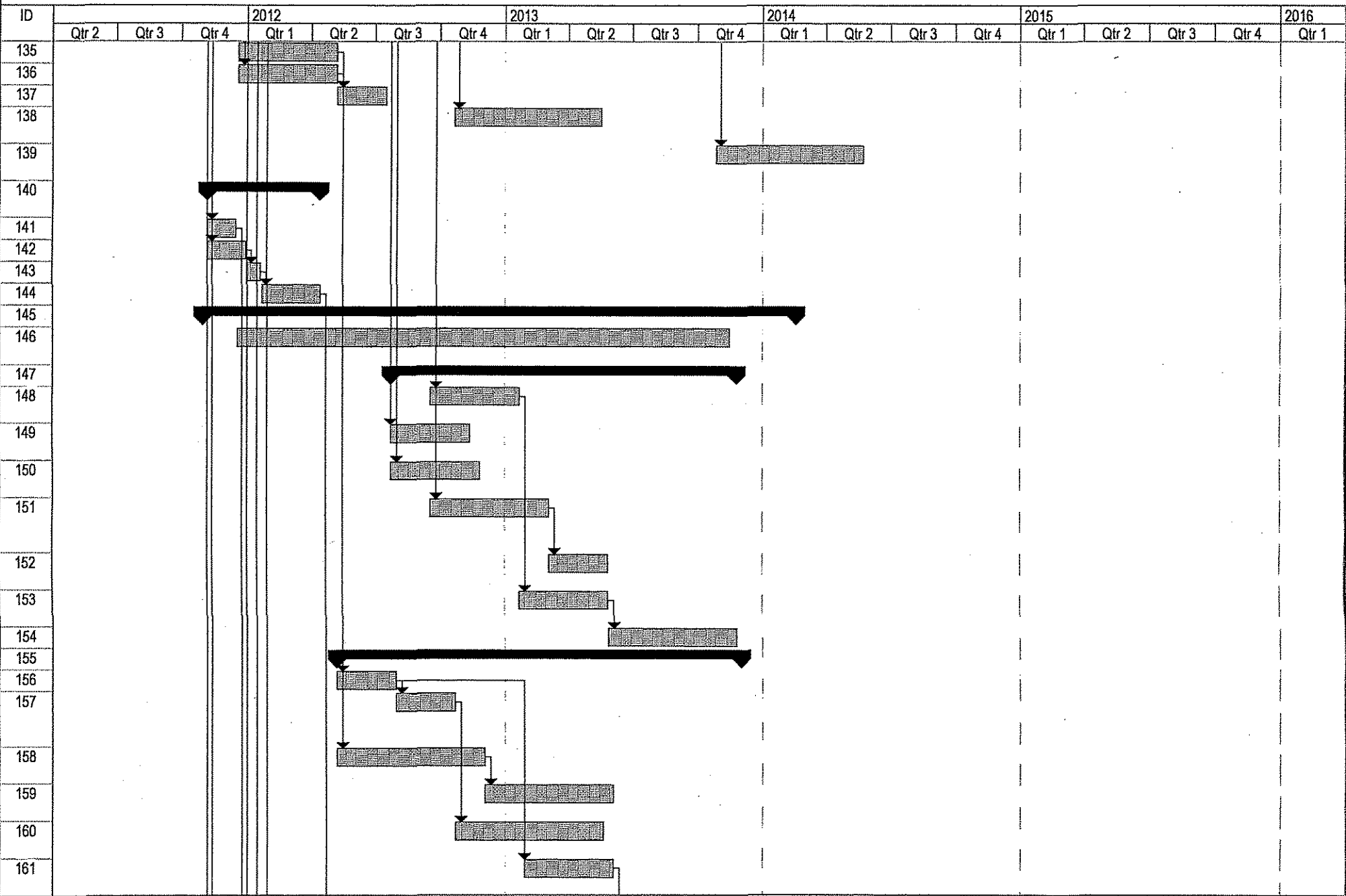


This Project Schedule is subject to revision as per the terms of the Project Agreement.

LADWP Smart Grid Regional Demonstration Program

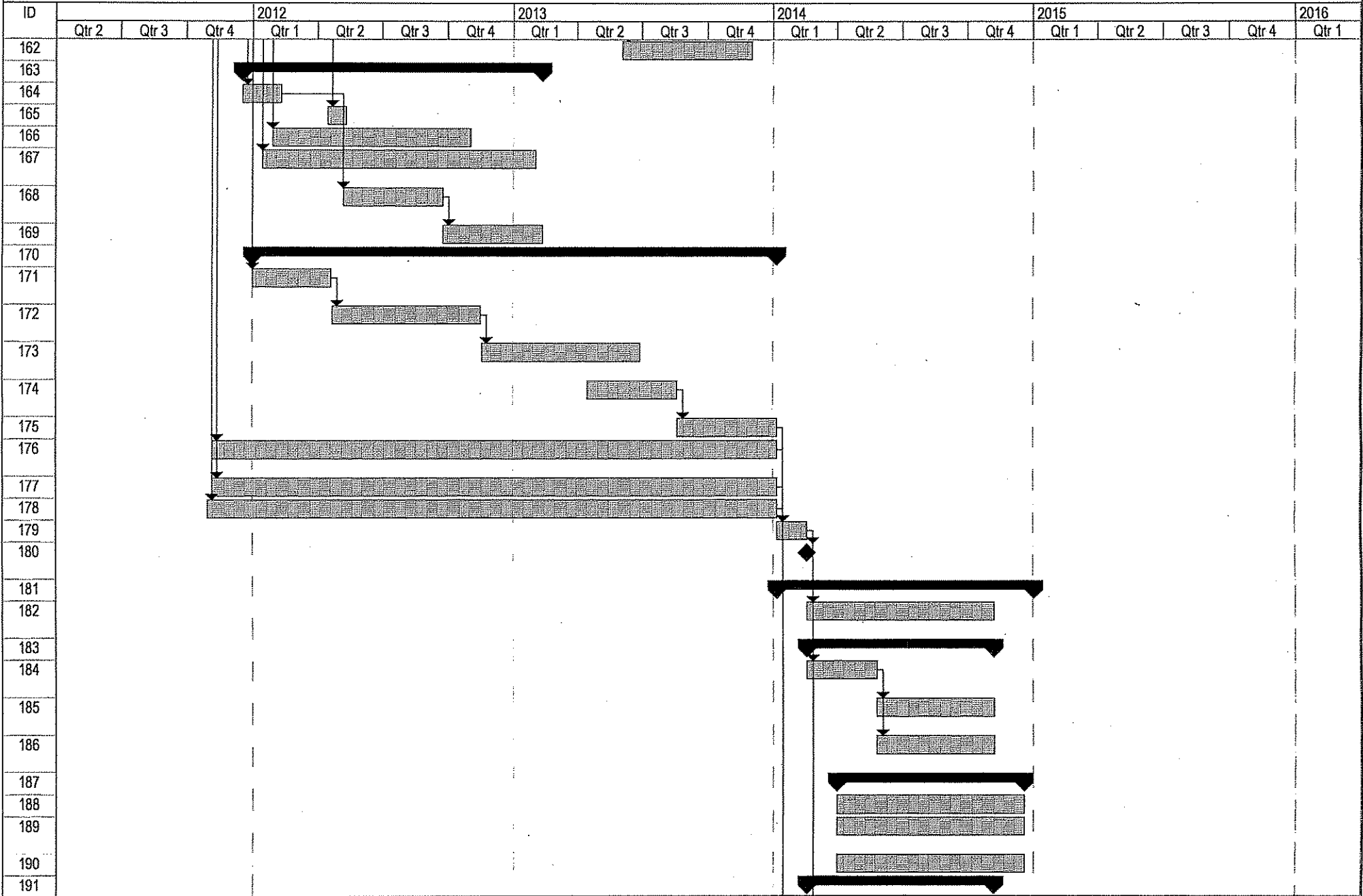


LADWP Smart Grid Regional Demonstration Program



This Project Schedule is subject to revision as per the terms of the Project Agreement.

LADWP Smart Grid Regional Demonstration Program



LADWP Smart Grid Regional Demonstration Program

ID	2012				2013				2014				2015				2016		
	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1			
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**EXHIBIT D: ADDITIONAL TERMS AND CONDITIONS BETWEEN
LADWP AND UCLA/USC**

Exhibit D

Additional Terms and Conditions between UCLA, USC, and LADWP

Article 1. Precedence Clause

In the event of a conflict between the Smart Grid Demonstration Project Agreement and this Exhibit D, the language set forth in this Exhibit D shall take precedence.

Article 2. Deviations from the Smart Grid Demonstration Project Agreement Terms and Conditions Applicable to UCLA and USC

The following terms and conditions as set forth in the Smart Grid Demonstration Project Agreement do not apply to UCLA or USC:

Exhibit H paragraph SP-27.

And the following are modified as set forth in Article 5 below:

SP-3; SP-13; SP-22; SP-23.

Article 3. Allowable Costs and Fees

Allowable costs and fees for the Universities performance of this Project Agreement shall be determined in accordance with the terms of this Project Agreement and other applicable laws, regulations and standards, including without limitation OMB Circular A-21, as well as the budget attached hereto and incorporated herein as Exhibit B, and with the various budgets to be developed for each of the three Project Areas that the Universities anticipate being involved in – the Electric Vehicles Project Area; the Demand Response Project Area; and the Behavioral Studies Project Area. The budget for a given Task Order related to a particular Project Area will show, unless otherwise agreed in a Task Order, anticipated costs by the major cost categories generally requested by DOE including: Personnel (including salaries and benefits); Equipment; Travel; Materials & Supplies; Publication Costs; Consultant Services; Subcontracts; Other Direct Costs; and Indirect Costs.

Although the Universities will make a good faith effort to accurately estimate its costs for each Task Order or Task Order Deliverable, it is understood that the Universities provide no assurance that the proposed efforts will be accomplished for the estimated costs. Should the effort cost more than estimated, the Universities will notify LADWP as soon as possible. In such event LADWP shall either (i) pay costs incurred up to the amount committed and specified in the relevant Task Order, and the research will end when that funding is exhausted, provided the terms of this Project Agreement have been met; and/or (ii) commit to provide additional funding, at LADWP's discretion, in order to continue the proposed effort under a revised estimate provided by the Universities through a properly developed and accepted Task Order issued under this Project Agreement.

Article 4. Payment of Payment requests

During the performance period of a Task Order, the Universities shall submit Payment Requests for costs incurred under that Task Order no more frequently than monthly. The payment request will include costs incurred by the categories described in Article 3, above or as otherwise specified in a Task Order. If the costs for more than one Task Order are included on single Payment Request, the Payment Request will segregate the costs by Task Order.

Upon receipt of a Payment Request, LADWP shall remit payment to the Universities within 60 days after LADWP receives funds from DOE.

Checks shall be made payable to The Regents of the University of California, Los Angeles (EIN No: 95-6006143), reference the UCLA File No., and sent to:

UCLA Remittance Center
Box 951432, 1125 Murphy Hall
405 Hilgard Avenue
Los Angeles, CA 90095-9000
Ms. Amy Felix, Supervisor
Telephone: (310) 794-3690
Facsimile: (310) 794 3694

Checks shall be made payable to the University of Southern California (EIN No: 072933393) and sent to:

University of Southern California
Sponsored Projects Accounting
File # 52095
Los Angeles, CA 90074-2095
ATTN: Cindy Lee, Manager-
Telephone: (213) 740-5381
Facsimile: (213) 740 7798

Article 5. Modifications to Exhibit H

1. SP-3: Applicable Law, Interpretation, Enforcement and Severability of Exhibit H is modified to delete the words, "and the City of Los Angeles" from the 3rd line of the second paragraph.
2. SP-13: Non Discrimination/Equal Employment Practices/Affirmation Action in Exhibit H is modified to delete the words "and the City of Los Angeles" from the 2nd line of the first paragraph.
3. SP-22: Standard Provisions for Department of Water and Power Professional Service Contracts-Retention of Records, Audit and Reports of Exhibit H is modified by changing the 15 calendar days time periods in the sixth and seventh paragraphs to 30 calendar days.
4. SP-23: University Responsibility in Exhibit H is modified to insert "that to the best of its knowledge at the time of execution of this Agreement," after the word "pledges" in the 1st line of the second paragraph.

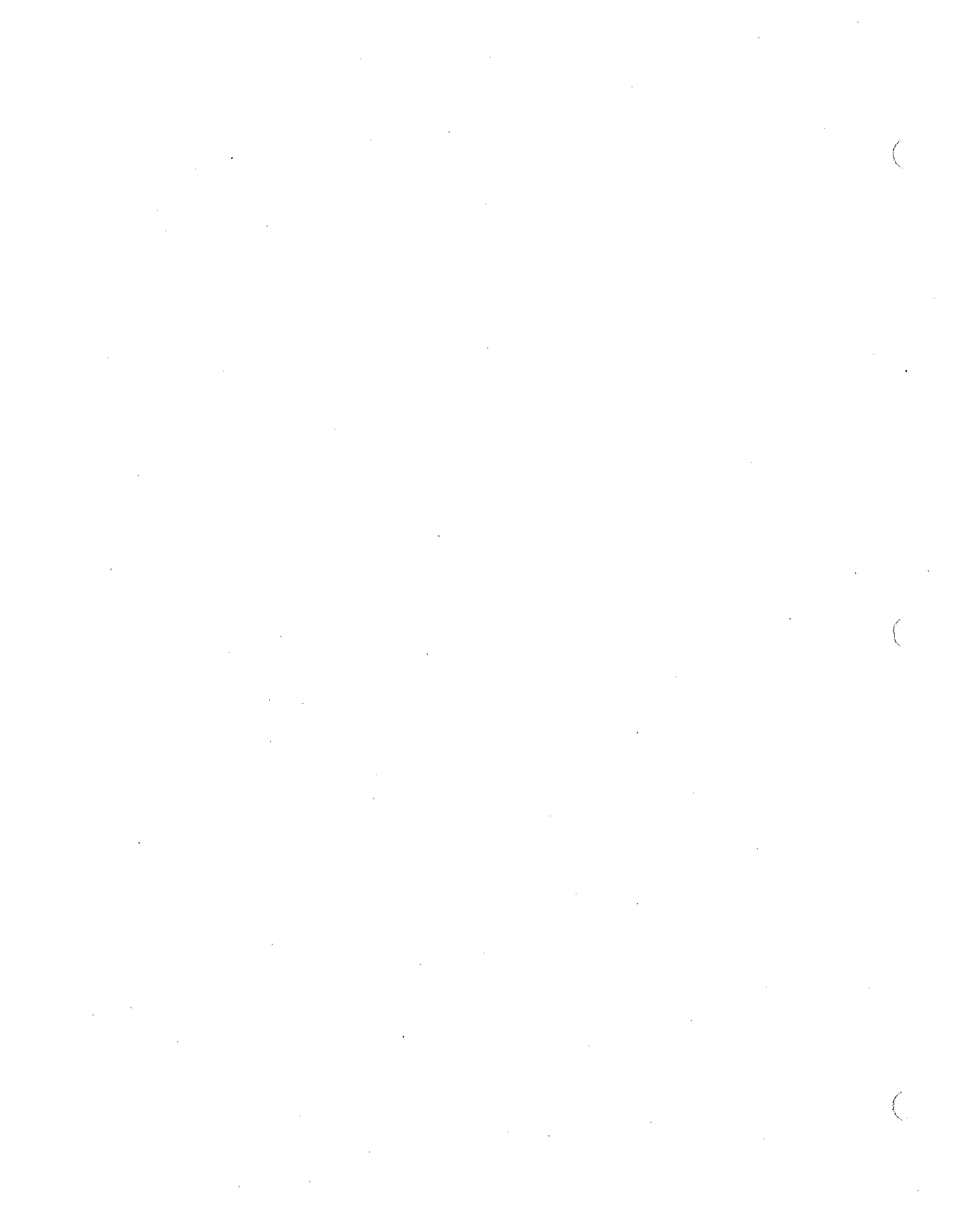
Article 6: Property

All non-deliverable tangible property acquired by the University using the DOE funds will remain the property of the University, subject to the rules set forth in 10 CFR 600.321, and provided that the acquisition of such property was in accordance with applicable DOE Terms as well as any applicable federal law or regulation, and further, not inconsistent with the express terms of any applicable Task Order.

Article 7: Use of University and City Name

Neither Party will use the name, trade name, trademark or other designation of the other in connection with any products, promotion, advertising, press release, or publicity without the written permission of the other Party in relation to this Project Agreement or the work and activities thereunder.

EXHIBIT E: INTELLECTUAL PROPERTY AGREEMENT



Agreement
Smart Grid Regional Demonstration Project
Allocation of Rights in Intellectual Property

This Agreement between the City of Los Angeles acting by and through the Department of Water and Power, ("LADWP"), University of Southern California ("USC"), California Institute of Technology ("Caltech") on behalf of its operating division the Jet Propulsion Laboratory ("JPL") and THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California constitutional corporation, acting through its Los Angeles Campus, ("UCLA") (collectively the "Parties") is entered into for the purpose of allocating between the Parties certain rights relating to the project to be carried out by the Parties under a funding agreement that was awarded by The Department of Energy ("DOE") to LADWP ("Prime Award") to fund a proposal entitled "Smart Grid Regional Demonstration Project" ("Project"). USC, JPL, and UCLA shall be referred to herein individually as "University" and collectively as "Universities." The Effective Date of this Agreement is the date it is signed by the last signatory.

1. Applicability of this Agreement.

- (a) This Agreement shall be applicable only to matters relating to the Project referred to in the preamble above.
- (b) The provisions of this Agreement shall apply to any and all consultants, subcontractors, independent contractors, or other individuals employed by the Parties, and in the case of employees of LADWP, to the extent legally permissible, for the purposes of this Project. LADWP will make reasonable efforts to ensure that LADWP personnel participating in the Project are specifically assigned to work on the Project. The Universities agree to make reasonable efforts to not assign or permit personnel to work on the Project whose participation would impede the right of the Universities to grant the licenses or rights described in Sections 3(d), 3(e) or 3(j) or to contribute funding to the Project from sources which would impede the granting of such licenses, and to notify the other Parties as soon as practicable should a University (or Universities) become aware of such participation or funding.

2. Definitions.

- (a) "Background Intellectual Property" means any intellectual property, tangible or intangible, that may be rightfully used by a Party for the performance of the Project that is (i) first conceived by that Party before the Effective Date of this Agreement or (ii) first conceived by that Party outside of the performance of the Project not using Project funding.
- (b) "Individual" means any employee, consultant, representative, independent contractor, or other individual who is under an obligation to assign intellectual property rights to a Party.
- (c) "Field of Use" means the services, functions and activities within the LADWP's authority under the Los Angeles City Charter ("Charter"), the Los Angeles Administrative Code, and other applicable law, but not including new business activity which may be added to LADWP's authority from time to time under Section 680(a) of the Charter or any successor Charter provision after the Effective Date of this Agreement.
- (d) "Joint Project Invention" means a Project Invention jointly invented by Individuals of two or more Parties.
- (e) "Project Invention" means an invention that is first conceived and actually reduced to practice in the performance of research under the Project by Individual(s) of a Party or Parties and which is patented, the subject of a patent application, or otherwise protectable under Title 35 of the United States Code.
- (f) "University Joint Project Invention" means a Joint Project Invention where the inventors are Individuals of two or more Universities and Individuals from LADWP are not inventors.

(g) "University Sole Project Invention" means a Project Invention invented solely by Individuals of one University.

3. Intellectual Property.

- (a) Inventorship of Project Inventions will be determined in accordance with United States Patent Law.
- (b) **Sole Project Inventions.** All rights to Project Inventions invented solely by Individuals of one Party will belong solely to that Party. In the case of JPL, the federal government retains a right to use such JPL Project Inventions royalty-free, for authorized government purposes.
- (c) **Joint Project Inventions.** All rights to Joint Project Inventions will be owned jointly by the Parties whose Individuals invented those Joint Project Inventions. Joint Project Inventions will be managed in accordance with United States Patent Laws. For example, and without limitation, each joint owner may make, use, sell and license a Joint Project Invention without accounting to the other joint owner(s). In the case of JPL, the federal government retains a right to use such Joint Project Inventions in which JPL is an inventing Party, royalty-free, for authorized government purposes. Owners of a Joint Project Invention may enter into such separate agreements as they may find convenient or necessary to facilitate the filing of patent applications, licensing, and commercialization ("Inter-Institutional Agreement"), as long as those separate agreements do not impede, diminish or affect the rights of the Parties under this Agreement.
- (d) **Non-Exclusive License to LADWP to University Project Inventions.** To the extent the Universities can legally do so, and subject to the terms and conditions set forth in this Agreement, the Universities shall grant to LADWP a royalty-free, non-exclusive license to make, use, sell, offer to sell, and import, within the Field of Use, University Sole Project Inventions and University Joint Project Inventions. Under this non-exclusive commercial license, LADWP shall have the right to grant sublicenses to its bona-fide subcontractors and vendors to make and use such University Sole Project Invention or University Joint Project Invention on LADWP's behalf limited to LADWP's Field of Use. For non-exclusive commercial licenses, the Universities will provide LADWP a simplified licensing form ("Non-Exclusive License Form") upon the occurrence of each Potential Licensing Notice, under which form LADWP will have six (6) months to elect the non-exclusive license set forth in this Section 3(d). Unless otherwise agreed upon by mutual written consent between LADWP and the University owner (or owners) of the relevant Project Invention, the Non-Exclusive License Form shall be limited to the following major provisions (notwithstanding this limitation on major provisions, the Non-Exclusive License Form may contain incidental or otherwise minor or administrative provisions as may be applicable): (a) a disclaimer of all warranties with respect to the Project Invention; (b) a mutual limitation of liability such that LADWP and the particular University (or Universities) will not be responsible to each other for any liability that may result from permitted uses of the Project Invention, except that the mutual and proportional indemnification obligations (as between UCLA, USC and LADWP) and the indemnification obligation (between LADWP and Caltech) described in subsection (c) of this sentence shall not be subject to this limitation of liability; (c) a mutual hold harmless provision, and, for licenses from USC and UCLA, a mutual and proportional indemnification provision essentially identical to the mutual and proportional indemnification provision in SP-17 of Exhibit H to the Smart Grid Demonstration Project Agreement, except that where SP-17 makes reference to "the performance, non-performance or breach" of the Smart Grid Demonstration Project Agreement, such references shall be replaced and instead refer to the provisioning, conveyance, granting and use of the non-exclusive license, and to breaches and performance/non-performance of the non-exclusive license agreement, and for Caltech licenses, an indemnification provision as set forth in Section 7 of this Agreement; (d) a provision regarding the use of names and/or trademarks similar to Section 4(d); (e) a reporting provision regarding LADWP's use of the Project Invention to be provided no more than once per year at the written request of the University owner (or owners) of the Project Invention; and (f) a provision requiring that each of LADWP's contracts granting sublicenses to bona-fide subcontractors and vendors to make and use Inventions for which LADWP has a non-exclusive license pursuant to this Section 3(d) include a provision requiring that such bona-fide subcontractors and vendors indemnify and additionally insure the

relevant Universities against claims of loss or damage that may arise from the bona-fide subcontractors' and vendors' performance or non-performance under any contracts providing for such sublicensing. Notwithstanding the foregoing, any indemnification provision contained in the Smart Grid Demonstration Project Agreement is separate from and shall not affect any indemnification obligations that may be set forth in the Non-Exclusive License Form. In addition, absent LADWP's agreement to reimburse costs associated with the prosecution and maintenance of any associated patent application or other intellectual property protection for Project Inventions subject to this Section 3(d), the University or Universities are under no obligation to obtain or maintain any intellectual property protection for such Project Inventions.

- (e) **Time Limited Right to Negotiate an Exclusive License to University Project Inventions.** To the extent that LADWP pays all agreed upon direct and indirect costs (as such direct and indirect costs may be described and allocated in the Smart Grid Demonstration Project Agreement between the Parties or authorized task order under such Smart Grid Demonstration Project Agreement, and in the case of Caltech, the direct and indirect costs of NASA/JPL) of the inventing University's (or Universities' as the case may be) performance hereunder, and to the extent that the inventing University (or Universities) is legally able, LADWP will be granted a time-limited first right to negotiate a royalty and/or fee bearing exclusive license under the inventing University's (or Universities') rights in (i) any University Sole Project Invention, (ii) any University Joint Project Invention, and/or (iii) a Joint Project Invention that is jointly owned by one or more Universities and LADWP.
- (f) **Disclosure of Project Inventions.** Each Party will promptly disclose any Project Inventions to the other Parties. For potential licensing purposes, a University (or Universities) will provide a formal written notification to LADWP of a license opportunity ("Potential Licensing Notice") at a reasonable time on or after disclosure of a Project Invention, but in any event not before the University's (or Universities') internal invention reporting procedures have been followed, and provided that such procedures include a reasonably mature "enabling description" or that the particular Project Invention has been actually reduced to practice. The non-disclosing Party or Parties will hold such disclosure on a confidential basis for 3 years ("Protection Period") and during the Protection Period will not disclose the information to any third party without consent of the disclosing Party or Parties. The Parties understand and acknowledge that disclosures subject to this Section 3(f) may be disclosed to NASA as may be required of Caltech/JPL in the performance of Contract NAS7-03001. The Parties further understand and acknowledge that LADWP, as a municipal entity, is subject to certain open records laws, including without limitation the Ralph M. Brown Act (Cal. Gov't Code §54590 *et seq.*) and the California Public Records Act (Cal. Gov't Code §6250 *et seq.*). If a Project Invention is made public by law, to the extent the Project Invention has been made public the Parties do not have further confidentiality obligations with respect to that public information.

LADWP shall notify the affected Party or Parties in the event it receives a request for information, or is otherwise required to disclose, under either the Ralph M. Brown Act or the California Public Records Act information that relates to any disclosure of Project Inventions belonging to the affected Party or Parties in order for the affected Party or Parties to either, protest the request for information or disclosure requirement, or to initiate the appropriate intellectual property process to secure intellectual property protections.

- (g) **Notification to Elect a License.**
- i. Upon a Potential Licensing Notice, LADWP will advise the disclosing University or Universities in writing within six (6) months of such disclosure to LADWP whether or not it wishes to secure an exclusive license ("Election Period"). LADWP will have six (6) months from the date of election to conclude a license agreement with the disclosing University or Universities ("Negotiation Period"). The Negotiation Period may be extended upon mutual agreement of the parties to the license negotiation. Said license will contain commercially reasonable terms and include LADWP's obligation to reimburse patent costs for all Project Inventions subject to the license. The Parties acknowledge

and agree that LADWP is under no restrictions as to the other entities that LADWP may use or enter into business arrangements with in order to finance or structure a commercial transaction.

- ii. In the event it is necessary to file any patent applications to protect a Project Invention during the Election or Negotiation Periods for an exclusive commercial license, LADWP will reimburse costs associated with the prosecution and maintenance of any associated patent application or other intellectual property protection. Absent LADWP's agreement to reimburse such costs, the University or Universities are under no obligation to obtain or maintain any intellectual property protection for those Project Inventions. If LADWP elects to discontinue the payment for the associated intellectual property protection prior to issuance of a valid patent, LADWP thereby waives and gives up any right it may have under this Agreement to exclusively license the particular Project Invention under Section 3 of this Agreement.
- iii. If such exclusive license under Section 3 is not concluded within the Negotiation Period, neither party to the license negotiation will have any further obligations to the other with respect to such Project Invention. If LADWP does not elect to secure such exclusive license, rights to such Project Invention will be disposed of in accordance with each University's policies, with no further obligation to LADWP with respect to such Project Invention.

(h) **Background Intellectual Property Rights.** LADWP shall have the right to request a royalty and/or fee bearing license to University owned Background Intellectual Property. To the extent the Universities are legally able, such a license may be granted at the discretion of the University owning the Background Intellectual Property, consistent with its own policies and practices and subject to any obligations to third parties. The Universities agree to make reasonable efforts to perform work on the Project without utilizing Background Intellectual Property for which the Universities are legally unable to grant the licenses described in this Section 3(h), and to notify the other Parties as soon as practicable should a University (or Universities) become aware of the potential or actual utilization of Background Intellectual Property.

(i) **License Rights to Universities.** For all Project Inventions, whether solely or jointly owned, the Universities are granted a non-exclusive license to (i) use Project Inventions for educational, research and infrastructure related purposes, and (ii) to allow other non-profit research institutions to use such Project Inventions for educational and research purposes.

(j) **Copyright.** Copyright in works, including computer software, created or fixed in a tangible medium of expression solely by Individuals of one Party under this Agreement will vest solely in that Party. Copyright in works, including computer software, created or fixed in a tangible medium of expression jointly by Individuals of one or more Parties will vest jointly in those Parties. To the extent a University (or Universities) can legally do so, the University (or Universities) shall grant to LADWP a royalty-free, non-exclusive right to reproduce, distribute, display, make derivatives, use, and perform, within the Field of Use, copyrighted material first created in the performance of the Project, and will also provide LADWP a time-limited right to negotiate an exclusive license. Licenses for copyrighted material will follow the same procedures set forth in 3(d) and 3(e) for other Project Inventions, except that to the extent software is not subject to a Potential Licensing Notice due to said software not being a Project Invention under the meaning of Section 2 (e), a Potential Licensing Notice should occur after the relevant software has achieved a reasonably mature degree of functionality and operation, and only after the University's (or Universities') internal reporting procedures for such software have been followed. With regards to software developed by one or more Parties under the Smart Grid Demonstration Project Agreement, the Parties hereby acknowledge and agree that such software may be written under or incorporate portions that are or may become subject to an open source license (including, without limitation and by way of example, the GNU Software Foundation or BSD licenses) (collectively, "Open Source Software"). However, software which is not Open Source Software at the time an exclusive license is granted under this Agreement to LADWP will not be thereafter converted to or released as Open Source

Software by the relevant University (or Universities), except as may be agreed in writing between LADWP and the University (or Universities).

- (k) **License Rights to the Federal Government.** The federal government shall be entitled to rights to Project Inventions and any copyrightable works created under this Agreement in accordance with the terms of the Prime Award. In the case of JPL, the federal government shall be entitled to rights to Project Inventions and any copyrightable works created under this Agreement which JPL Individuals solely or jointly invent in accordance with the terms of the Caltech-NASA Prime Contract.
- (l) **No Implied Rights.** Nothing contained in this Agreement shall be deemed to grant either directly or by implication, estoppel, or otherwise, any rights under any patents, patent applications or other proprietary interests, whether dominant or subordinate, or any other invention, discovery or improvement of any Party, other than the specific rights covering Project Inventions and copyrights under this Agreement.
- (m) **Limited License for Project Purposes.** To the extent the Party or Parties are legally able, for all Project Inventions, Joint Project Inventions, University Joint Project Inventions, University Sole Project Inventions, Background Intellectual Property and copyrights, the Parties shall grant to each of the other Parties, as may be necessary, a limited license to practice and use such intellectual property for the sole purpose of performing research under the Project.
- (n) **Assignment.** This Agreement may not be assigned by the Parties except in the case of a sale of all or substantially all of a Party's assets; in the case of JPL, except to NASA or other successor-in-interest for the operation of JPL.

4. Publication and Use of Name.

- (a) The Parties acknowledge that results of the Project will be published or otherwise publicly disclosed. Although the Parties expect to jointly publish the results, each Party reserves the right to publicly disclose its own information and data generated by it in the performance of the Project. The Parties agree to abide by the policies of journals in which the publications will appear on such matters as the public release or availability of data relating to the publication. Authorship of results of the Project will be determined in accordance with academic standards and custom. Proper acknowledgment will be made for the contributions of each Party to the research results being published and in accordance with the terms of the Prime Award. This Section 4(a) does not affect the rights and obligations of the Parties under Section 3(f) to keep Project Inventions confidential.
- (b) LADWP will have the right to publish and use any technical reports and information specified to be delivered by the Universities in the Project. The federal government shall be entitled to license rights in accordance with the terms of the Prime Award. In the case of JPL, the federal government shall be entitled to rights in accordance with the terms of the Caltech-NASA Prime Contract.
- (c) The Parties agree to confer and consult prior to the publication of Project results to assure that no proprietary information of a Party is released and that patent rights are not jeopardized. Prior to submitting a manuscript for review that contains the results of Project research, or prior to publication if no such review is made, each party shall be offered thirty (30) days to review such proposed publication and to file a patent application in a timely manner, if it is so entitled under this Agreement.
- (d) The Parties are not permitted to use any name, trade name, trademark, or other designation of another Party or its employees (including contraction, abbreviation or simulation of any of the foregoing) in advertising, publicity or other similar promotional activity.

5. Term; Termination.

This Agreement is in effect until the later date of (i) expiration or termination of the Smart Grid Demonstration Project Agreement; or (ii) expiration of the term of 5 years following the Effective Date, unless such term is extended by mutual agreement. The rights and obligations set forth in Section 3 ("Intellectual Property"), Section 4 ("Publication and Use of Name") and Section 6 ("Governing Law; Venue; Miscellaneous") shall survive the expiration of this Agreement.

6. Governing Law; Venue; Miscellaneous.

The governing law and venue provisions of the Smart Grid Demonstration Project Agreement shall govern this Agreement. The Parties agree that except as otherwise specified in this Agreement, the rights and remedies of the Parties (except for Caltech) shall be governed by the terms of the Smart Grid Demonstration Project Agreement.

7. Caltech-Specific Terms.

Caltech is not a signatory to the Smart Grid Demonstration Project Agreement and is not receiving funding from LADWP or DOE under the Smart Grid Demonstration Project Agreement but rather from NASA. Caltech/JPL activities and efforts in support of the Smart Grid Demonstration Project shall be conducted on a best efforts non-interference basis in accordance with the Caltech NASA Prime Contract, NAS7-03001 ("JPL Prime Contract") and any resulting task orders issued by NASA under the JPL Prime Contract. While Caltech is not a signatory to the Smart Grid Demonstration Project Agreement, unless in conflict with the JPL Prime Contract or any NASA issued task order thereunder, the following provisions of the Smart Grid Demonstration Project Agreement shall apply as between LADWP, the other Universities and Caltech, but only in reference to and with respect to this Agreement to which Caltech is a signatory:

Section 2.4 (NASA Whereas Recital); Article 10 (Dispute Resolution) (except the provisions involving the Executive Committee); Article 11 (Records); Article 12 (Reporting) (if and only to the extent such recordkeeping and reporting is required by the DOE or the Prime Award); Section 15.2 of Article 15 (as it relates to the enforcement of rights); Article 19 (Notices); Article 20 (Execution in Counterparts; Effective Date); Article 22 (Non-Public Information); Article 23 (Export Control); Article 24 (Notice); Article 25 (Relationship of the Parties); Exhibit H (only paragraphs SP-10 (Independent University); SP-29 (Beneficiaries); and SP-31 (Attorney's Fees and Costs)). Survival: The obligations and rights in 15.2 of Article 15 (relating to the enforcement of rights) shall survive the expiration of termination of this Agreement, as well as the two paragraphs below this paragraph.

In the event any of the above listed provisions conflict with the JPL Prime Contract, any NASA task orders issued thereunder, or Exhibit F of the Smart Grid Demonstration Project Agreement, the controlling order of precedence shall be the JPL Prime Contract, and NASA task orders issued thereunder, and finally the above listed provisions.

With respect to Section 3(d) of this Agreement LADWP agrees that a Caltech Non-Exclusive License Form shall contain an indemnity provision in which LADWP shall indemnify Caltech for damages arising under the Caltech Non-Exclusive License in an amount no greater than 10 Million USD.

The Caltech authorized representative ("Authorized Representative") for notices and other actions under this Agreement shall be Caltech's signatory below. Caltech will comply with all applicable federal laws concerning non-discrimination, affirmative action, child support, wage and worker retention, and disability, as may be required of Caltech pursuant to the JPL Prime Contract.

THE UNIVERSITY OF SOUTHERN CALIFORNIA

By: _____
(Signature)
Name: _____
Title: _____
Date: _____

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES BY BOARD OF WATER AND POWER COMMISSIONERS OF THE CITY OF LOS ANGELES

By: _____
Austin Beutner, General Manager
Date: _____
And: _____
Secretary


THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF ITS LOS ANGELES CAMPUS

By: _____
(Signature)
Name: _____
Title: _____
Date: _____

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY

By: _____
(Signature)
Name: _____
Title: _____
Date: _____


APPROVED AS TO FORM AND LEGALITY
CARMEN A. TRUTANICH, CITY ATTORNEY

MAY 12 2010
BY 
LONNIE ELDRIDGE
DEPUTY CITY ATTORNEY



THE UNIVERSITY OF SOUTHERN CALIFORNIA

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES BY BOARD OF WATER AND POWER COMMISSIONERS OF THE CITY OF LOS ANGELES

By: 
(Signature)
Name: Sara Judd
Title: Director
Date: Department of Contracts & Grants
5/5/10

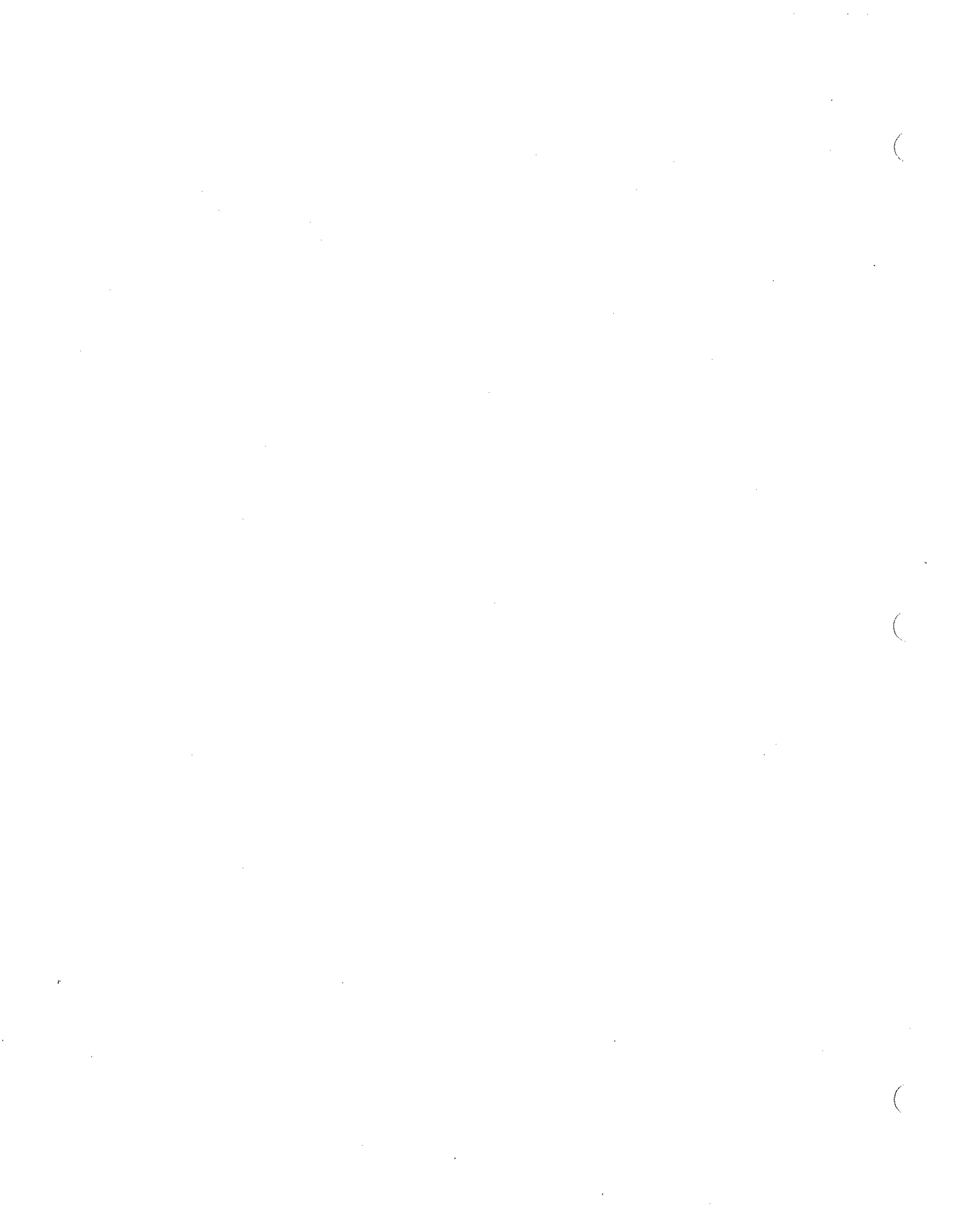
By: _____
Austin Beutner, General Manager
Date: _____
And: _____
Secretary

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF ITS LOS ANGELES CAMPUS

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY

By: _____
(Signature)
Name: _____
Title: _____
Date: _____

By: _____
(Signature)
Name: _____
Title: _____
Date: _____



THE UNIVERSITY OF SOUTHERN CALIFORNIA

By: _____
(Signature)
Name: _____
Title: _____
Date: _____

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF ITS LOS ANGELES CAMPUS

By: Kim Duiker
(Signature)
Name: Kim Duiker
Title: Contract and Grant Officer
Date: 05/04/2010

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES BY BOARD OF WATER AND POWER COMMISSIONERS OF THE CITY OF LOS ANGELES

By: _____
Austin Beutner, General Manager
Date: _____
And: _____
Secretary

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY

By: _____
(Signature)
Name: _____
Title: _____
Date: _____



THE UNIVERSITY OF SOUTHERN CALIFORNIA

DEPARTMENT OF WATER AND POWER OF THE CITY OF LOS ANGELES BY BOARD OF WATER AND POWER COMMISSIONERS OF THE CITY OF LOS ANGELES


By: _____
(Signature)
Name: _____
Title: _____
Date: _____

By: _____
Austin Beutner, General Manager
Date: _____
And: _____
Secretary

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF ITS LOS ANGELES CAMPUS

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY

By: _____
(Signature)
Name: _____
Title: _____
Date: _____

By:  _____
(Signature) **Fred Farina**
Asst. Vice President
Name: _____ **Office of Technology Transfer**
Title: _____ **California Institute of Technology**
Date: May 3, 2010



**EXHIBIT F: ADDITIONAL TERMS AND CONDITIONS BETWEEN NASA
AND LADWP**

ADDITIONAL TERMS AND CONDITIONS BETWEEN NASA AND LADWP

ARTICLE 1. PRECEDENCE CLAUSE

In the event of a conflict between the SMART GRID DEMONSTRATION PROJECT AGREEMENT and this Exhibit F, ADDITIONAL TERMS AND CONDITIONS BETWEEN NASA AND LADWP, the language set forth in this Exhibit F shall take precedence.

ARTICLE 2. DEVIATIONS FROM THE SMART GRID DEMONSTRATION PROJECT AGREEMENT TERMS AND CONDITIONS APPLICABLE TO NASA/JPL

The following terms and conditions set forth in the SMART GRID DEMONSTRATION PROJECT AGREEMENT do not apply to NASA or JPL:

Articles 5.1-5.3; the portion of 5.4 that refers to Task Orders; 5.9; 6; 8; 9.4 (except that NASA/JPL will, upon notice of voluntary withdrawal, exert reasonable efforts if legally permissible to limit or terminate any ongoing financial expenditures related to the Project); 14.2; 15; 16; Exhibit G; and Exhibit H paragraphs SP-3 (Applicable Law); SP-13 (Non-Discrimination); SP-14 (Claims for Labor and Materials); SP-16 (Reserved); SP-17 (Mutual and Proportional Indemnity); SP-18 (Insurance); SP-19 (Child Support Policy); SP-20 (Service Contract Worker); SP-22 (Retention of Records); SP-24 (Reserved); SP-25 (Reserved); SP-26 (Reserved); and SP-27 (Recycling Policy).

While the LADWP Business Policies set forth in Exhibit G and SP-13; SP-19; SP-20; and SP-27 do not apply as noted above, as an agency of the United States Federal Government, NASA is required to follow any and all federal counterparts to these city and state statutes, regulations, ordinances, and policies and shall do so in accordance with work done pursuant to this Project Agreement.

ARTICLE 3. PAYMENT PROCEDURES

A transfer of funds is anticipated from LADWP to NASA in connection with this Project Agreement if LADWP authorizes work under this Project Agreement. The Parties agree that the terms of payment for NASA's participation shall be as specified below.

Provided that LADWP and NASA agree on particular tasks and work to be performed, and such tasks and work are then authorized by LADWP, LADWP agrees to fund or convey to NASA up to a maximum estimated cost of \$9,000,000 to conduct the proposed research and/or testing under this Project Agreement. There are five (5) Task Identification Work Authorizations ("TIWAs") attached to this Exhibit F, and each TIWA specifies work to be done by NASA in a particular area. After LADWP and NASA agree on the specific written Statement of Work ("SOW") and delivery schedule ("Delivery Schedule") for any particular TIWA, LADWP will authorize NASA to submit a pro forma invoice to LADWP for the initial incremental payment described in each TIWA. The pro forma invoice shall include NASA's City of Los Angeles Tax Registration Number. LADWP and NASA may agree to begin work on TIWAs in any particular

Exhibit F

order, or in parallel. No particular TIWA (or any TIWA) or work thereunder will necessarily be authorized or conducted under this Project Agreement.

Payments and NASA activities will occur pursuant to the specific tasks, obligations and terms set forth in TIWAs attached to this Exhibit F. For each TIWA, LADWP and NASA shall work collaboratively to develop a specific SOW (Section 7) and Delivery Schedule (Section 8) in writing. Once the particular SOW and Delivery Schedule are developed, LADWP will request in writing that NASA begin work under the completed TIWA, including the developed SOW and Delivery Schedule, and will remit payment to NASA as set forth in this Exhibit F and the particular TIWA. LADWP is under no obligation to request that NASA perform any particular work under this Project Agreement.

Payment shall be made in advance of initiation of efforts under this Agreement, in the form of a check payable to NASA.

Address and mail the check and cover letter (see below) associating your check to Space Act Agreement 82-15369 to the following:

NASA Shared Service Center (NSSC) - FMD Accounts Receivable
Attention: Ms. Barbara Harriel, for the Accounts of NASA/Jet Propulsion Laboratory
Building 1111, C Road
Stennis Space Center, MS 39529

The following information is required on the cover letter:

- a. The name, title, address, and telephone number of the LADWP's proposed technical manager.
- b. The name, title, address, and telephone number of the administrative point of contact for this effort.
- c. Reference to the Space Act Agreement 82-15369 and date.

Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Project Agreement or any particular TIWA will be accomplished for the above estimated amount. Should the effort cost more than estimated, LADWP will be notified by NASA as soon as possible. In such event LADWP shall either (i) for any particular TIWA, pay all costs incurred through the date of such notice and canceling the remaining effort, or (ii) for any particular TIWA, commit to provide additional funding in order to continue the proposed effort under a revised estimate provided by NASA. Should the Project Agreement or any TIWA be terminated, or the Project Agreement or TIWA effort completed and cost less than the agreed to estimated cost, NASA shall account for any unspent funds after completion of all effort under this Project Agreement or the particular TIWA, and promptly thereafter, return any unspent funds to LADWP.

NASA shall provide actual cost reports to LADWP including data required by the DOE Terms, and shall include cost reports related to personnel (including salaries and benefits); equipment; travel; materials & supplies; publication costs; consultant services; subcontracts; other direct costs; and indirect costs.

ARTICLE 4. SCHEDULING CONFLICTS

The schedule and milestones identified in TIWAs and SOWs are estimated based upon the Parties' current understanding of the projected use of NASA resources. In the event NASA's projected usage changes, LADWP shall be given reasonable notice of the change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's or the U.S. Federal Government's usage of the test facilities and equipment shall have priority over the usage planned in this Project Agreement, should a conflict arise, and NASA, at its sole discretion, shall determine whether to exercise that priority. Likewise, should a conflict arise between two or more users, NASA, at its sole discretion, shall determine the priority between the two users.

ARTICLE 5. NONEXCLUSIVITY

This Project Agreement is not exclusive; accordingly, NASA or the LADWP may enter into similar agreements for the same or similar purpose with other private or public entities.

ARTICLE 6. PROPERTY

Non-Deliverable Tangible Property. All tangible property produced or acquired under this Project Agreement that is not a deliverable pursuant to the Responsibilities and Schedules/Milestones herein shall become the property of NASA. At the conclusion of work under this Project Agreement, for tangible property that is solely funded by LADWP and/or DOE funds, NASA will transfer ownership to LADWP at LADWP's written request. Upon such request, LADWP shall take possession of its tangible property and bear the costs of the removal and transportation to its own facility. Any transportation or disposal of property shall be in accordance with applicable Federal, State, and local requirements.

Deliverable Tangible Property. Ownership for all tangible property produced or acquired under this Agreement that is a deliverable pursuant to the attached TIWAs herein shall remain with NASA until completion of SOWs or TIWAs under this Project Agreement. Upon completion of said SOW or TIWAs, or termination of this Project Agreement, NASA will effect transfer of ownership of all such tangible property to LADWP.

ARTICLE 7. EXPORT CONTROL

Compliance. The parties acknowledge and agree that this Project Agreement is subject in all respects to the laws and regulations of the United States, including the Export Administration Act of 1979 (50 U.S.C. App. 2401, et seq.), as amended, and the Export Control Act (22 U.S.C. 2778), as amended, and all regulations thereunder, including the International Traffic in Arms Regulations (22 C.F.R. 120-130), as amended, and Export Administration Regulations (15

C.F.R. 730-774), as amended. The Parties understand that information and technology resulting from the performance of this Project Agreement may be subject to export control laws and regulations, and each party is responsible for its own compliance with such laws and regulations. Nothing in this Project Agreement waives any such statutory or regulatory requirement. The Parties further acknowledge that export control restrictions may impact NASA's ability to perform the work and/or may result in delays in any planned deliverables and LADWP agree that NASA shall not be responsible to LADWP for any resulting inability to perform and/or delays.

Disclosure of Export Control Data. If a Party or its contractor(s) discloses technical data subject to U.S. export laws and regulations to the other party under this Agreement, the receiving party agrees that, if required by law, such technical data will not be provided to foreign persons (as defined in 22 C.F.R. 120.16 or as otherwise specified by law) or be shipped or transmitted outside the United States without proper U.S. Government authorization, where required, regardless of whether the data is marked or identified by a legend. A Party or its contractor(s) will not knowingly disclose technical data subject to U.S. export laws and regulations without first discussing the matter with the potential receiving Party. The Parties agree to work collaboratively to determine appropriate procedures if necessary to comply with any applicable legal requirements with respect to export control data.

ARTICLE 8. USE OF NASA NAME AND NASA EMBLEMS

1. NASA Name and Initials: LADWP agrees the words "National Aeronautics and Space Administration," the letters "NASA," or the name or mark of any NASA RELATED ENTITIES will not be used in connection with a product or service in a manner reasonably calculated to convey any impression that such product or service has the authorization, support, sponsorship, or endorsement of NASA, or JPL, which does not, in fact, exist. LADWP agrees that any proposed promotional or advertising use of the NASA name or initials shall be submitted by LADWP in advance to the NASA Assistant Administrator for Public Affairs or designee ("NASA Public Affairs") for review and approval. Approval by NASA Public Affairs shall be based on applicable law and policy governing the use of the NASA name and initials. In addition, LADWP agrees that any proposed promotional or advertising use of the name or marks of any NASA RELATED ENTITY shall be submitted by LADWP in advance to the NASA RELATED ENTITY Public Affairs Office or designee for review and approval.

2. NASA Emblems:
Use of NASA emblems/devices (i.e., NASA Seal, NASA Insignia, NASA Logotype, NASA Program Identifiers, and the NASA Flag) are governed by 14 C.F.R. Part 1221. LADWP agrees that any proposed use of such emblems/devices related to this Project Agreement shall be submitted for review and approval in accordance with such regulations.

ARTICLE 9. DISCLAIMER OF WARRANTY

EQUIPMENT, GOODS, FACILITIES, TECHNICAL INFORMATION, AND SERVICES PROVIDED BY NASA OR NASA RELATED ENTITIES UNDER THIS AGREEMENT ARE PROVIDED "AS IS" AND NEITHER NASA NOR ITS RELATED ENTITIES MAKE ANY

EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITION OF SUCH EQUIPMENT, GOODS, FACILITIES, TECHNICAL INFORMATION, OR SERVICES, OR AS TO THE CONDITION OF SUCH EQUIPMENT, GOODS, FACILITIES, TECHNICAL INFORMATION, OR SERVICES, OR AS TO THE CONDITION OF ANY RESEARCH, INFORMATION GENERATED, OR PRODUCTS MADE OR DEVELOPED UNDER THIS AGREEMENT, OR AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF SUCH RESEARCH, INFORMATION, OR RESULTING PRODUCT, OR THAT THE EQUIPMENT, GOODS, FACILITIES, TECHNICAL INFORMATION, OR SERVICES PROVIDED WILL ACCOMPLISH THE INTENDED PURPOSE, OR THAT ANY OF THE ABOVE WILL NOT INTERFERE WITH PRIVATELY OWNED RIGHTS OF OTHERS. NEITHER THE GOVERNMENT NOR ITS CONTRACTORS SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES ATTRIBUTED TO SUCH EQUIPMENT, GOODS, FACILITIES, TECHNICAL INFORMATION, OR SERVICES PROVIDED UNDER THIS AGREEMENT OR SUCH RESEARCH, INFORMATION, OR RESULTING PRODUCTS MADE OR DEVELOPED UNDER THIS AGREEMENT. NASA WARRANTS THAT ALL WORK DONE UNDER THIS AGREEMENT WILL BE PERFORMED IN ACCORDANCE WITH ALL LAWS, STATUTES, AND REGULATIONS AS INCORPORATED INTO THE NASA-JPL CONTRACT, WHICH HAS BEEN DRAFTED IN ACCORDANCE WITH THE FEDERAL ACQUISITION REGULATIONS AS THEY APPLY TO FEDERALLY-FUNDED RESEARCH AND DEVELOPMENT CENTERS.

ARTICLE 10. DISCLAIMER OF ENDORSEMENT

NASA does not endorse or sponsor any commercial product, service, or activity. NASA's participation in this Project Agreement and/or supply of goods (i.e., equipment, facilities, technical information, etc.) and services under this Project Agreement does not constitute endorsement by NASA. LADWP agrees that nothing in this Project Agreement will be construed to imply that NASA authorizes, supports, endorses, or sponsors any product or service of LADWP resulting from activities conducted under this Project Agreement, regardless of the fact that such product or service may employ NASA-developed technology.

ARTICLE 11. ANTI-DEFICIENCY ACT

All activities under or pursuant to this Project Agreement are subject to the availability of appropriated funds, and no provision shall be interpreted to require obligation or provision of funds in violation of the Anti-deficiency Act, 31, U.S.C. 1341.

ARTICLE 12. APPLICABLE LAW

This Project Agreement and the legal relations between NASA and any of the Parties shall be governed and construed in accordance with California and Federal law. In the event of any conflict between Federal law applicable to this Agreement and California State law, Federal law shall take precedence. If any part, term or provision of this Project Agreement shall be held invalid, void, illegal, unenforceable, or in conflict with any applicable state or federal law, the validity of the remaining parts, terms or provisions shall not be affected or impaired thereby.

ARTICLE 13. AUDIT

Upon LADWP or the City Controller's request and expense, any cognizant federal audit agency, including but not limited to the Defense Contract Audit Agency, the Government Accountability Office, and the NASA Office of the Inspector General, shall audit NASA's records related to this Project Agreement. NASA shall furnish detailed itemization of, and retain all records related to, direct expenses reimbursed to NASA, and to hours of employment on this Project Agreement by any employee of NASA or a NASA contractor by LADWP. Such records shall be maintained for a period of three years after final payment under this Project Agreement, or until audited pursuant to the LADWP or City Auditor's request, whichever occurs first. Once notified of a request for audit, NASA shall maintain such records until the audit is completed. Said audit will be conducted in accordance with U.S. Federal Government Auditing Standards, and shall be performed in a time frame and shall contain a scope of work agreed to by NASA and the requestor. The requestor shall be provided a copy of the audit report.

ARTICLE 14. DOE INDEMNITY REQUIREMENT

NASA agrees to assist LADWP in negotiating with DOE any issues related to a request for indemnification from DOE based on work performed by NASA or a NASA contractor under this Project Agreement.

Demand Response and Cyber Security Collaboration, Engineering, and Research

to

Los Angeles Department of Water and Power
111 N. Hope Street,
Los Angeles, CA 90012

JPL Task Plan No. 82-15369

JET PROPULSION LABORATORY
California Institute of Technology
Pasadena, California 91109

EXECUTIVE SUMMARY

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission.

It is expected that this collaboration will result in a number of fruitful technology, demonstration projects and studies, analyses and research efforts, the exchange of important technologies and engineering processes, and development of key technologies of mutual interest.

TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY	i
 <u>ARTICLE 2. PURPOSE AND AGENCY COMMITMENT</u>	
A. INTRODUCTION	10
B. OBJECTIVE	10
C. APPROACH	10
D. INFORMATION REGARDING JPL AND NASA'S RELATIONSHIP	
E. SCOPE OF WORK	12
 <u>ARTICLE 3. RESPONSIBILITIES</u>	
MANAGEMENT PLAN.....	13
 <u>ARTICLE 4. SCHEDULE AND MILESTONES</u>	
DELIVERY SCHEDULE	13
 <u>ARTICLE 5. FINANCIAL OBLIGATIONS</u>	
COST ESTIMATE	14

ARTICLE 2. PURPOSE AND AGENCY COMMITMENT

I. TECHNICAL SECTION

A. INTRODUCTION

1. The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

2. JPL SPECIAL COMPETENCIES

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWP's proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

B. OBJECTIVE

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

C. APPROACH

In the areas of demand response and cyber security, JPL will perform technology, assessments, studies and analyses, technology development planning and execution, modeling and prototype demonstrations to understand alternative architectures, system design approaches, and approach applicability, risk with risk mitigation alternatives and readiness. For each area of collaboration, JPL and LADWP will form technical teams to decide on the key elements of work to be done and which organization will accomplish the appropriate elements. The overall implementation plan will be undertaken by JPL after top-level agreements are decided upon. Joint programmatic/technical reviews and JPL-provided routine (usually monthly) progress/financial status reports on specific work elements or projects will be conducted and delivered as required.

JPL's effort can be viewed as a set of accountable tasks determined by the LADWP priorities that may be stand-alone efforts or a collection of interrelated efforts to achieve a common goal. Each task requirement is evaluated on a case-by-case basis in conjunction with the LADWP to determine the best technical and cost effective solution and the results are documented in an approved Task Identification Work Authorization (TIWA).

This task plan is for JPL and the LADWP to develop the TIWA, which will contain scope, description and schedule for newly identified tasks. The TIWA will include the cost estimates of the new tasks and LADWP will fund the work resulting from the updated agreement. It is understood that as time progresses, the TIWA may be modified as other new tasks are added or tasks deleted depending on the LADWP's priorities and available funding within the fields of demand response and cyber security.

D. INFORMATION REGARDING JPL AND NASA'S RELATIONSHIP

The Jet Propulsion Laboratory (JPL) is a government-owned contractor operated Federally Funded Research and Development Center (FFRDC) that conducts programs in Space Science and other scientific areas approved by its sponsor, NASA. JPL is operated for NASA by the California Institute of Technology (Caltech), which is a private educational institution.

Neither JPL nor Caltech is an arm of the Federal Government nor are any of their employee's agents of the Federal Government empowered to bind NASA to agreements with reimbursable sponsors.

Caltech operates JPL under NASA Contract NAS7-03001, which is administrated by Federal employees of the NASA Management Office located on-site at JPL. While Caltech is responsible for preparation of reimbursable proposals and performance of assigned tasks under the contract, agreements sending work to JPL are executed between Contracting Officers of the NASA Management Office, and the sponsor. Please be advised that Federal law places strict constraints on the types of work that an FFRDC, such as JPL, may perform for NASA or other sponsors.

All reimbursable work that NASA agrees to accept under NAS7-03001 must be consistent with its terms and conditions and JPL's mission as an FFRDC as determined by the NASA Contracting Officer in accordance with Clause C-1 (b) of the NAS7-03001.

E. SCOPE OF WORK

The Jet Propulsion Laboratory (JPL) will, for the LADWP, conduct technology, mission assessments, studies and analyses, development planning and execution, modeling and prototype demonstrations to understand alternative architectures, system design approaches, approach applicability, risk with risk mitigation alternatives and readiness in the demand response and cyber security technology areas.

In the performance of this work, JPL will, on a best-efforts, non-interference basis:

1. Undertake specific technology assessment tasks in accordance with discussions and agreement between JPL and the LADWP.
2. Perform analyses and assessments to ascertain candidate technologies' state of development and potential cost/benefit trades.
3. Prepare briefings and reports to document the analyses, assessments and plans prepared by JPL under this effort, as requested by the LADWP
6. Perform technology developments in accordance with mutually agreed upon plans.
7. Design, engineer and construct prototype sub-assemblies, instruments, sub-systems and/or systems as mutually agreed.
8. Prepare briefings and reports to document technology, instrument and mission developments, prototype implementations and flight demonstrations, as requested by the LADWP.
10. Prepare informal monthly progress reports.
11. Generate a Task Identification Work Authorization (TIWA), in conjunction with the LADWP.
12. Prepare TIWA Revisions, as required.
13. Prepare a follow-on Task Plan, if requested.
14. Prepare a Final Report, if requested.

ARTICLE 3. RESPONSIBILITIES

MANAGEMENT PLAN

1. Task Management Responsibility

As the Task Managers, Kymie Tan (cyber security) and Michael Gross (demand response) are responsible for the technical execution of their respective tasks, including cost, schedule, and performance. They are responsible for managing resources, coordinating the overall efforts, and accomplishing the formal deliverables identified in JPL Task Plan 82-15369. Kymie and Michael will conduct team meetings to assess progress against the planned cost, schedule, and performance. In addition, they must ensure that the costs remain within the allotted sponsor funding and the task does not overrun.

ARTICLE 4. SCHEDULE AND MILESTONES

DELIVERY SCHEDULE

JPL will deliver to *LADWP*, in JPL format:

1. One copy of technology assessment plans, as requested by the LADWP.
2. One copy of briefing materials, studies, development plans, and other documents, as requested by the LADWP.
3. One copy of a Final Report on each development effort with the development item as requested by the LADWP but no later than six months after task completion.
5. One copy of new, updated and revised TIWA, no later than 1 month following request for update by the LADWP.
6. Two copies of a follow-on Task Plan, if requested, due not later than sixty months after task order execution.
7. Other deliverables and schedules that may be agreed-upon in any particular TIWA.

ARTICLE 5. FINANCIAL OBLIGATIONS

A. COST ESTIMATE (dollars expressed in thousands)

The relevant cost estimate will be provided via each TIWA.

TASK IDENTIFICATION WORK AUTHORIZATION (TIWA)

Task Plan No.	TIWA #	Date	JPL Point of Contact
82-15369	01	29 April 2010	Dean Wiberg
JPL Contracts Administrator	NASA Contracting Officer	LADWP Program Manager	JPL Task Lead
Lisa Haber	Theresa Moulse	Aditya Sharma	Kymie Tan

1. **TITLE:** “Cyber Security Support to Smart Grid Demonstration Project – Phases 1 & 2”
2. **PERIOD OF PERFORMANCE:** The Period of Performance is through 16 months with an estimated start date July 15, 2010.
3. **TOTAL ESTIMATED COST:** \$1,500,000 (ROM – Budgetary Planning Only)
4. **REFERENCE:** (1) JPL Space Act Agreement 82-15369, entitled “Demand Response and Cyber Security Collaboration, Engineering, and Research,” dated 29 April 2010
- **5. INTRODUCTION:** The Task Identification Work Authorization (TIWA) described below is assigned in accordance with the scope indicated in the reference task plan. Funding authorization will be provided to NASA by the Los Angeles Department of Water and Power (LADWP). This funding is obligated and transferred as reimbursable funds to NASA in accordance with th 42 U.S.C. 2473(c)(5) and (6), section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The transfer must acknowledge that the work to be performed shall be solely under the terms and conditions of NAS7-03001. *In no event shall work be done under this Agreement in advance of receipt of funds from the Participant.*

The following information is to be included in each order:

- The Agency Location Code (ALC): 80000055
- Reference the JPL Task Plan Number 82-15369 and Task Identification Work Authorization Number: **82-15369-01.**

6. TECHNICAL INSTRUCTION

Introduction:

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP’s mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

JPL Special Competencies:

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWPs proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

Objective:

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

Approach:

JPL will perform cyber security tasks for Phases 1 and of the LADWP's *Smart Grid Regional Demonstration Project*.

7. SCOPE OF WORK

JPL will, for LADWP, on a best efforts basis:

- a. *Detailed tasks to be agreed between the Parties pursuant to the Exhibit F.*

8. DELIVERY SCHEDULE

JPL will deliver to LADWP, in JPL format:

- a. *Detailed schedule to be agreed between the Parties pursuant to Exhibit F.*

9. SECURITY REQUIREMENTS: The work effort associated with this project is unclassified.

10. **COST ESTIMATE:** The total estimated cost for the work to be performed under this TIWA is \$1,500,000. This value is a rough order of magnitude (ROM) only, and included for informational purposes only. JPL reserves the right to reprice the effort to reflect current rates and factors as well as scope.

11. CONTACT INFORMATION:

LADWP: Matthew Lampe, Chief Information Officer
(213) 367-2553

George Chen, Rates Manager
(213) 367-2531

Marvin Moon, Power Engineering Manager
(213) 367-1716

JPL: Dean Wiberg, Program Manager
818-354-5724 (o); 818-731-3256 (m)

Kymie Tan, Task Manager
818-354-0235

Lisa Haber, Contracts Administrator
(818) 393-3456

12. JPL APPROVAL:

Dean Wiberg., JPL Program Manager Date

13. SPONSOR APPROVAL:

Aditya Sharma, Project Manager Date
LADWP

TASK IDENTIFICATION WORK AUTHORIZATION (TIWA)

Task Plan No.	TIWA #	Date	JPL Point of Contact
82-15369	02	29 April 2010.	Dean Wiberg
JPL Contracts Administrator	NASA Contracting Officer	LADWP Program Manager	JPL Task Lead
Lisa Haber	Theresa Moulse	Aditya Sharma	Michael Gross

2. **TITLE:** "Demand Response Support to Smart Grid Demonstration Project – Phases 1 & 2"
2. **PERIOD OF PERFORMANCE:** The Period of Performance is through 16 months with an estimated start date July 15, 2010.
3. **TOTAL ESTIMATED COST:** \$1,500,000 (ROM – Budgetary Planning Only)
4. **REFERENCE:** (1) JPL Space Act Agreement 82-15369, entitled "Demand Response and Cyber Security Collaboration, Engineering, and Research," dated 29 April 2010
- **5. INTRODUCTION:** The Task Identification Work Authorization (TIWA) described below is assigned in accordance with the scope indicated in the referencfe task plan. Funding authorization will be provided to NASA by the Los Angeles Department of Water and Power (LADWP). This funding is obligated and transferred as reimbursable funds to NASA in accordance with th 42 U.S.C. 2473(c)(5) and (6), section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The transfer must acknowledge that the work to be performed shall be solely under the terms and conditions of NAS7-03001. *In no event shall work be done under this Agreement in advance of receipt of funds from the Participant.*

The following information is to be included in each order:

- The Agency Location Code (ALC): 80000055
- Reference the JPL Task Plan Number 82-15369 and Task Identification Work Authorization Number: 82-15369-02.

6. TECHNICAL INSTRUCTION

Introduction:

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis

capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

JPL Special Competencies:

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWP's proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

Objective:

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

Approach:

JPL will perform demand response tasks for Phases 1 and 2 of the LADWP's *Smart Grid Regional Demonstration Project*.

7. SCOPE OF WORK

JPL will, for LADWP, on a best efforts basis:

- a. *Detailed tasks to be agreed between the Parties pursuant to the Exhibit F.*

8. DELIVERY SCHEDULE

JPL will deliver to LADWP, in JPL format:

a. Detailed schedule to be agreed between the Parties pursuant to Exhibit F.

9. **SECURITY REQUIREMENTS:** The work effort associated with this project is unclassified.

10. **COST ESTIMATE:** The total estimated cost for the work to be performed under this TIWA is \$1,500,000. This value is a rough order of magnitude (ROM) only, and included for informational purposes only. JPL reserves the right to reprice the effort to reflect current rates and factors as well as scope.

11. CONTACT INFORMATION:

LADWP: Matthew Lampe, Chief Information Officer
(213) 367-2553

George Chen, Rates Manager
(213) 367-2531

Marvin Moon, Power Engineering Manager
(213) 367-1716

JPL: Dean Wiberg, Program Manager
818-354-5724 (o); 818-731-3256 (m)

Michael Gross, Task Manager
818-393-3342

Lisa Haber, Contracts Administrator
(818) 393-3456

12. JPL APPROVAL:

Dean Wiberg., JPL Program Manager Date

13. SPONSOR APPROVAL:

Aditya Sharma, Project Manager Date
LADWP

TASK IDENTIFICATION WORK AUTHORIZATION (TIWA)

Task Plan No.	TIWA #	Date	JPL Point of Contact
82-15369	03	29 April 2010	Dean Wiberg
JPL Contracts Administrator	NASA Contracting Officer	LADWP Program Manager	JPL Task Lead
Lisa Haber	Theresa Moulse	Aditya Sharma	Kymie Tan

3. **TITLE:** "Cyber Security Support to Smart Grid Demonstration Project – Phases 3-5 (ARRA FUNDED)"
2. **PERIOD OF PERFORMANCE:** The Period of Performance is through 44 months with an estimated start date April 01, 2011.
3. **TOTAL ESTIMATED COST:** \$1,500,000 (ROM – Budgetary Planning Only)
4. **REFERENCE:** (1) JPL Space Act Agreement 82-15369, entitled "Demand Response and Cyber Security Collaboration, Engineering, and Research," dated 29 April 2010
- **5. INTRODUCTION:** The Task Identification Work Authorization (TIWA) described below is assigned in accordance with the scope indicated in the reference task plan. Funding authorization will be provided to NASA by the Los Angeles Department of Water and Power (LADWP). This funding is obligated and transferred as reimbursable funds to NASA in accordance with th 42 U.S.C. 2473(c)(5) and (6), section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The transfer must acknowledge that the work to be performed shall be solely under the terms and conditions of NAS7-03001. *In no event shall work be done under this Agreement in advance of receipt of funds from the Participant.*

The following information is to be included in each order:

- The Agency Location Code (ALC): 80000055
- Reference the JPL Task Plan Number 82-15369 and Task Identification Work Authorization Number: **82-15369-03.**

6. TECHNICAL INSTRUCTION

Introduction:

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and

demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

JPL Special Competencies:

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWP's proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

Objective:

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

Approach:

JPL will perform cyber security tasks for Phases 3 through 5 of the LADWP's *Smart Grid Regional Demonstration Project*.

7. SCOPE OF WORK

JPL will, for LADWP, on a best efforts basis:

- a. *Detailed tasks to be agreed between the Parties pursuant to the Exhibit F and Department of Energy Terms in "Exhibit A to the Smart Grid Demonstration Project Agreement".*

8. DELIVERY SCHEDULE

JPL will deliver to LADWP, in JPL format:

- a. Detailed tasks to be agreed between the Parties pursuant to the Exhibit F and Department of Energy Terms in "Exhibit A to the Smart Grid Demonstration Project Agreement".*

- 9. SECURITY REQUIREMENTS:** The work effort associated with this project is unclassified.

10. **COST ESTIMATE:** The total estimated cost for the work to be performed under this TIWA is \$1,500,000. This value is a rough order of magnitude (ROM) only, and included for informational purposes only. JPL reserves the right to reprice the effort to reflect current rates and factors as well as scope.

11. CONTACT INFORMATION:

LADWP: Matthew Lampe, Chief Information Officer
(213) 367-2553

George Chen, Rates Manager
(213) 367-2531

Marvin Moon, Power Engineering Manager
(213) 367-1716

JPL: Dean Wiberg, Program Manager
818-354-5724 (o); 818-731-3256 (m)

Kymie Tan, Task Manager
818-354-0235

Lisa Haber, Contracts Administrator
(818) 393-3456

12. JPL APPROVAL:

Dean Wiberg., JPL Program Manager Date

13. SPONSOR APPROVAL:

Aditya Sharma, Project Manager Date
LADWP

TASK IDENTIFICATION WORK AUTHORIZATION (TIWA)

Task Plan No.	TIWA #	Date	JPL Point of Contact
82-15369	04	29 April 2010	Dean Wiberg
JPL Contracts Administrator	NASA Contracting Officer	LADWP Program Manager	JPL Task Lead
Lisa Haber	Theresa Moulse	Aditya Sharma	Michael Gross

4. **TITLE:** "Demand Response Support to Smart Grid Demonstration Project – Phases 3-5 (ARRA FUNDED)"
2. **PERIOD OF PERFORMANCE:** The Period of Performance is through 44 months with an estimated start date April 01, 2011.
3. **TOTAL ESTIMATED COST:** \$1,500,000 (ROM – Budgetary Planning Only)
4. **REFERENCE:** (1) JPL Space Act Agreement 82-15369, entitled "Demand Response and Cyber Security Collaboration, Engineering, and Research," dated 29 April 2010
- **5. INTRODUCTION:** The Task Identification Work Authorization (TIWA) described below is assigned in accordance with the scope indicated in the reference task plan. Funding authorization will be provided to NASA by the Los Angeles Department of Water and Power (LADWP). This funding is obligated and transferred as reimbursable funds to NASA in accordance with th 42 U.S.C. 2473(c)(5) and (6), section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The transfer must acknowledge that the work to be performed shall be solely under the terms and conditions of NAS7-03001. *In no event shall work be done under this Agreement in advance of receipt of funds from the Participant.*

The following information is to be included in each order:

- The Agency Location Code (ALC): 80000055
- Reference the JPL Task Plan Number 82-15369 and Task Identification Work Authorization Number: **82-15369-04.**

6. TECHNICAL INSTRUCTION

Introduction:

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

JPL Special Competencies:

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWP's proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

Objective:

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

Approach:

JPL will perform demand response tasks for Phases 3 through 5 of the LADWP's *Smart Grid Regional Demonstration Project*.

7. SCOPE OF WORK

JPL will, for LADWP, on a best efforts basis:

- a. Detailed tasks to be agreed between the Parties pursuant to the Exhibit F and Department of Energy Terms in "Exhibit A to the Smart Grid Demonstration Project Agreement".*

8. DELIVERY SCHEDULE

JPL will deliver to LADWP, in JPL format:

- a. Detailed tasks to be agreed between the Parties pursuant to the Exhibit F and Department of Energy Terms in "Exhibit A to the Smart Grid Demonstration Project Agreement".*

- 9. SECURITY REQUIREMENTS:** The work effort associated with this project is unclassified.

Exhibit F

10. **COST ESTIMATE:** The total estimated cost for the work to be performed under this TIWA is \$1,500,000. This value is a rough order of magnitude (ROM) only, and included for informational purposes only. JPL reserves the right to reprice the effort to reflect current rates and factors as well as scope.

11. CONTACT INFORMATION:

LADWP: Matthew Lampe, Chief Information Officer
(213) 367-2553

George Chen, Rates Manager
(213) 367-2531

Marvin Moon, Power Engineering Manager
(213) 367-1716

JPL: Dean Wiberg, Program Manager
818-354-5724 (o); 818-731-3256 (m)

Michael Gross, Task Manager
818-393-3342

Lisa Haber, Contracts Administrator
(818) 393-3456

12. JPL APPROVAL:

Dean Wiberg., JPL Program Manager Date

13. SPONSOR APPROVAL:

Aditya Sharma, Project Manager Date
LADWP

TASK IDENTIFICATION WORK AUTHORIZATION (TIWA)

Task Plan No.	TIWA #	Date	JPL Point of Contact
82-15369	05	29 April 2010	Dean Wiberg
JPL Contracts Administrator	NASA Contracting Officer	LADWP Program Manager	JPL Task Lead
Lisa Haber	Theresa Moulse	Aditya Sharma	Kymie Tan

5. **TITLE:** "JPL-LADWP Cyber Security Technology Collaboration"
2. **PERIOD OF PERFORMANCE:** The Period of Performance is through 24 months with an estimated start date October 01, 2010.
3. **TOTAL ESTIMATED COST:** \$3,000,000 (ROM – Budgetary Planning Only)
4. **REFERENCE:** (1) JPL Space Act Agreement 82-15369, entitled "Demand Response and Cyber Security Collaboration, Engineering, and Research," dated 29 April 2010
- **5. INTRODUCTION:** The Task Identification Work Authorization (TIWA) described below is assigned in accordance with the scope indicated in the reference task plan. Funding authorization will be provided to NASA by the Los Angeles Department of Water and Power (LADWP). This funding is obligated and transferred as reimbursable funds to NASA in accordance with th 42 U.S.C. 2473(c)(5) and (6), section 203(c) of the National Aeronautics and Space Act of 1958, as amended. The transfer must acknowledge that the work to be performed shall be solely under the terms and conditions of NAS7-03001. *In no event shall work be done under this Agreement in advance of receipt of funds from the Participant.*

The following information is to be included in each order:

- The Agency Location Code (ALC): 80000055
- Reference the JPL Task Plan Number 82-15369 and Task Identification Work Authorization Number: **82-15369-05.**

6. TECHNICAL INSTRUCTION

Introduction:

The Los Angeles Department of Water and Power (LADWP) seeks to collaborate with the Jet Propulsion Laboratory (JPL) with the intent to leverage its cyber security and demand response technology developments, modeling, mission system and analysis capability and tools, development tools, experience, capability, and knowledge performed for the National Aeronautics and Space Administration (NASA) for the furtherance of LADWP's mission. The candidate technologies for collaboration will be limited to the demand response and cyber security technology areas.

LADWP funded activities may include JPL assistance in the identification, planning, execution and evaluation of technology developments.

JPL Special Competencies:

JPL has historically exercised a leadership role in developing and maturing new leading edge technologies in areas such as power systems, fault tolerant communications and autonomous operation of complex systems. Examples of unique capabilities and expertise that will be captured in support of LADWP's proposed effort include invention and development of direct methanol fuel cells, harsh environment Lithium battery electrolyte formulations, waste heat recovery using advanced thermoelectric materials designed and developed at JPL, design and operation of the Deep Space Network (DSN) employing communications technologies to deal with extremely faint and fault laden communication signals, development of autonomous operating and self regulating systems such as the Policy Based Management (PBM) system now being explored for use in the Dept of Defense's Transformational Communications System, similar systems such as cyber security systems to protect our space craft and ground systems and autonomous systems operation for our many complex, high value, space based robotic systems including our latest Mars rover mission, Mars Science Lab (MSL). Uniqueness in each of these areas has been validated by numerous requests from industry to support their activities. This JPL unique and synergistic body of experience and technical expertise is required by LADWP for the design, systems definition, component evaluation and systems engineering functions associated with the proposed work.

Objective:

The objective of this effort is fostering JPL-LADWP, collaborative demand response and cyber security research and development activities.

Approach:

JPL will perform cyber security tasks for LADWP's internally-funded Smart Grid initiatives.

7. SCOPE OF WORK

JPL will, for LADWP, on a best efforts basis:

- a. *Detailed tasks to be agreed between the Parties pursuant to the Exhibit F.*

8. DELIVERY SCHEDULE

JPL will deliver to LADWP, in JPL format:

- a. Detailed schedule to be agreed between the Parties pursuant to the Exhibit F.*

9. **SECURITY REQUIREMENTS:** The work effort associated with this project is unclassified.

10. **COST ESTIMATE:** The total estimated cost for the work to be performed under this TIWA is \$3,000,000. This value is a rough order of magnitude (ROM) only, and included for informational purposes only. JPL reserves the right to reprice the effort to reflect current rates and factors as well as scope.

11. CONTACT INFORMATION:

LADWP: Matthew Lampe, Chief Information Officer
(213) 367-2553

George Chen, Rates Manager
(213) 367-2531

Marvin Moon, Power Engineering Manager
(213) 367-1716

JPL: Dean Wiberg, Program Manager
(818) 354-5724 (o); (818) 731-3256 (m)

Kymie Tan, Task Manager
(818) 354-0235

Lisa Haber, Contracts Administrator
(818) 393-3456

12. JPL APPROVAL:

Dean Wiberg., JPL Program Manager Date

13. SPONSOR APPROVAL:

Aditya Sharma, Project Manager Date
LADWP

EXHIBIT G: LADWP BUSINESS POLICIES



EXHIBIT G

LADWP BUSINESS POLICIES

The LADWP business policies below apply to the other Parties unless an exception is set forth for a particular Party in this Project Agreement.

(a) LADWP's Recycling Policy.

(1) LADWP supports the use of recycled-content products of all types. Recycled-content products help conserve natural resources, including water and energy, and reduce demands upon landfills.

(2) Parties shall submit all written documents on paper with a minimum of 30 percent post-consumer recycled content. Existing company/corporate letterhead/stationery that accompanies these documents is exempt from this requirement. Documents of two or more pages in length shall be duplex-copied (double-sided pages). Neon or fluorescent paper shall not be used in any written documents submitted to LADWP.

(b) Non-Discrimination

(1) During the performance of this Project Agreement, a Party shall not discriminate in its employment practices against any employee or applicant for employment because of race, religion, national origin, ancestry, sex, age or physical handicap, and shall follow all applicable federal and state laws in this regard. All subcontracts awarded under this Project Agreement shall contain a like nondiscrimination provision.

(c) Child Support Policy. Each Party and any of its subcontractor(s) must fully comply with all applicable state and federal employment reporting requirements for the Party's and any of the Party's subcontractor(s)' employees. The Party and any of its subcontractor(s) must fully comply with all lawfully served Wage and Earnings Assignment Orders and Notices of Assignment in accordance with the California Family

EXHIBIT G

Code. The Party and any of its subcontractor(s) must certify that the principal owner(s) thereof (any person who owns an interest of 10 percent or more) are in compliance with any Wage and Earnings Assignment Orders or Notices of Assignment applicable to them personally. The Party and any of its subcontractor(s) must certify that such compliance will be maintained throughout the term of this Project Agreement. Failure of the Party and/or any its subcontractor(s) to fully comply with all applicable reporting requirements or to implement lawfully served Wage and Earnings Assignments or Notices of Assignment or failure of the principal owner(s) to comply with any Wage and Earnings Assignments or Notices of Assignment applicable to them personally shall constitute a default under this Project Agreement. Failure of the Party and/or any its subcontractor(s) or principal owner(s) thereof to cure the default within ninety (90) days of notice of such default by LADWP shall subject this Project Agreement to termination or mandatory withdrawal of the particular Party.

(d) Current Los Angeles City Business Tax Registration Certificate Required. Each Party shall obtain and keep in full force and effect during the term of this Agreement all Business Tax Registration Certificates required by the City of Los Angeles Business Tax Ordinance, Article 1, Chapter II, Section 21.00 and following, of the Los Angeles Municipal Code. The Party's Vendor Registration Number must be shown on all payment requests submitted for payment. Failure to do so, may delay payment. For additional information regarding applicability of the City Business Tax Registration, contact the City of Los Angeles Clerk's Office at (213) 978-1521.

EXHIBIT G

(e) Employer Identification Number (EIN). The Parties declare that their authorized EIN is UCLA: 95-6006143 USC: 072933393. NASA will provide their EIN. No payment will be made under this Agreement without a valid EIN number.

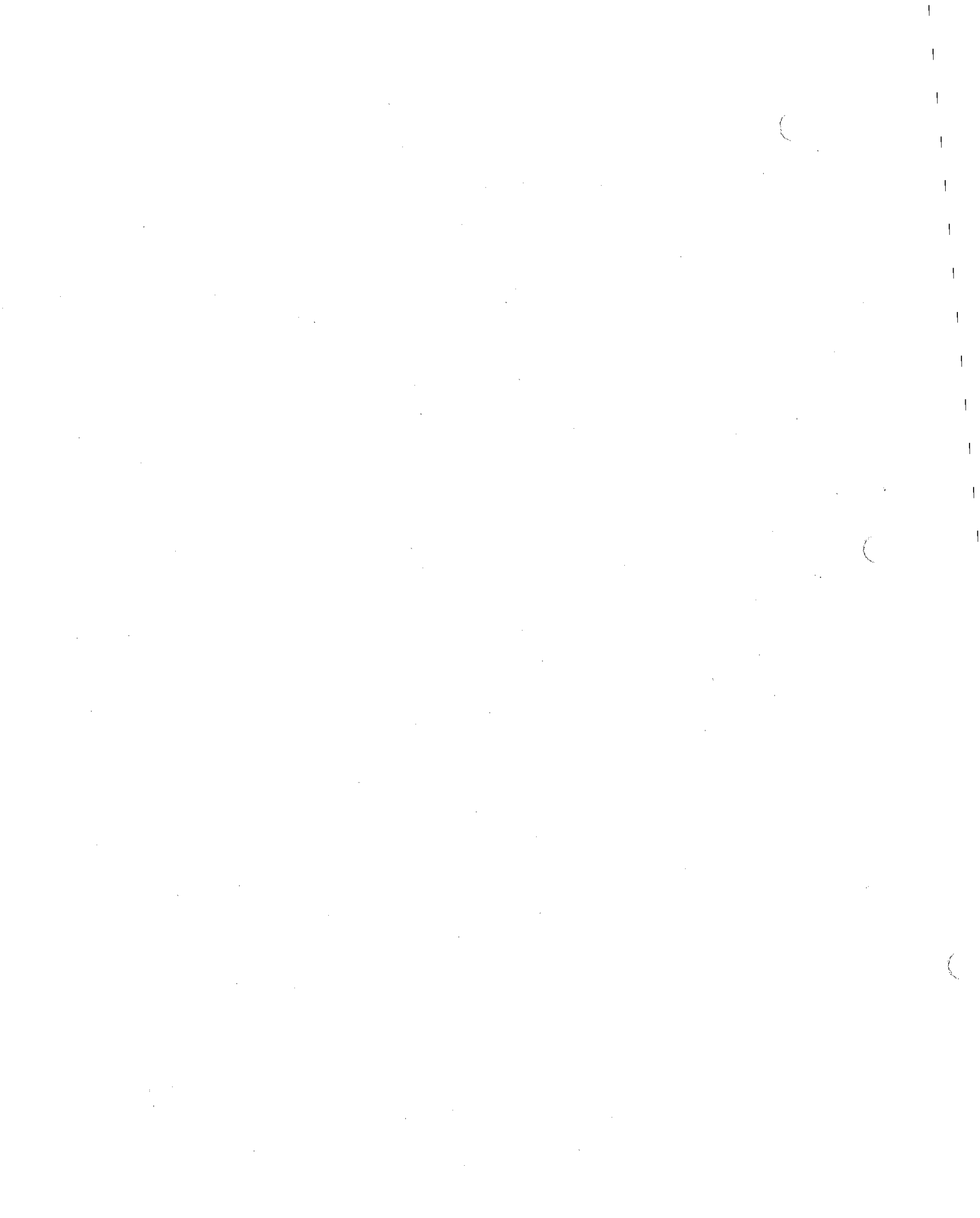


EXHIBIT H: STANDARD PROVISIONS FOR LADWP

EXHIBIT H

DEPARTMENT OF WATER AND POWER STANDARD PROVISIONS

SP-1 Construction of Provisions and Titles Herein

All titles or subtitles appearing herein have been inserted for convenience and shall not be deemed to affect the meaning or construction of any of the terms or provisions hereof. The language of this Agreement shall be construed according to its fair meaning and not strictly against the Department or the University. The word "University" herein and in any amendment hereto includes the Party or Parties identified in this Agreement wherein this Appendix is incorporated by reference; the singular shall include the plural; if there shall be more than one University herein, unless expressly stated otherwise, their obligations and liabilities hereunder shall be joint and several; use of feminine, masculine, or neuter gender shall be deemed to include the genders not used.

SP-2 Number of Originals

The number of original texts of this Agreement shall be equal to the number of the Parties hereto, one text being retained by each Party.

SP-3 Applicable Law, Interpretation, Enforcement and Severability

Each University's performance hereunder shall comply with all applicable laws of the United States of America, the State of California, and the City of Los Angeles, including but not limited to laws regarding health and safety, labor employment, wage and hours, workers compensation, and licensing laws which affect employees. Universities shall comply with new, amended, or revised laws, regulations, and/or procedures that apply to the performance of this Agreement.

This Agreement was made and entered into in the City of Los Angeles and shall be governed by, interpreted and enforced in accordance with the laws of the State of California and the City of Los Angeles, without regard to conflicts of laws principles. All litigation arising out of, or relating to, this Agreement shall be brought in a State or Federal court in the County of Los Angeles in the State of California. The Parties irrevocably agree to submit to the exclusive jurisdiction of such courts in the State of California and waive any defense of *forum non conveniens*.

If any part, term or provision of this Agreement shall be held invalid, void, illegal, unenforceable, or in conflict with any law of a federal, state or local government having jurisdiction over this Agreement, the validity of the remaining parts, terms or provisions shall not be affected or impaired thereby.

The provisions of this section shall survive the expiration or termination of this Agreement.

EXHIBIT H

SP- 4 Time of Effectiveness

Unless otherwise provided, this Agreement shall take effect when all of the following events have occurred:

- (a) This Agreement has been signed on behalf of the Universities by the person(s) authorized to bind the Universities hereto.
- (b) This Agreement has been approved by the City Council or by the Board, inclusive of City Council review period, officer, or employee authorized to give such approval.
- (c) The Office of the City Attorney has indicated in writing its approval of this Agreement as to form and legality.
- (d) This Agreement has been signed on behalf of the Department by the person designated by the Board, officer or employee authorized to enter into this Agreement.

SP-5 Integrated Agreement

This Agreement sets forth all of the rights and duties of the Parties with respect to the subject matter hereof, and replaces any and all previous agreements and understandings, whether written or oral, relating hereto. This Agreement may be amended only as provided for in paragraph SP-6.

SP-6 Amendment

All amendments hereto shall be in writing and signed on behalf of both Parties by the persons authorized to bind the Parties hereto.

SP-7 Excusable Delays

In the event that performance on the part of any Party hereto shall be delayed or suspended as a result of circumstances beyond the reasonable control and without the fault or negligence of said Party, none of the Parties shall incur any liability to the other Parties as a result of such delay or suspension. Circumstances deemed to be beyond the control of the Parties hereunder shall include, but are not limited to, acts of God or of the public enemy; insurrection; fires; floods; epidemics; quarantine restrictions; strikes; freight embargoes; to the extent that they are not caused by the Party's willful or negligent acts or omissions, and to the extent that they are beyond the Party's reasonable control.

EXHIBIT H

SP-8 Breach

Except for excusable delays as defined in SP-7, if any Party fails to perform, in whole or in part, any promise, covenant, or agreement set forth herein, or should any representation, warranty, certification or other statement made by it be untrue, any aggrieved Party may avail itself of all rights and remedies, at law or equity, in the courts of law.

SP-9 Waiver

A waiver of a default of any part, term, or provision of this Agreement shall not be construed as a waiver of any succeeding default or as a waiver of the part, term or provision itself. A Party's performance after the other Party's default shall not be construed as a waiver of that default.

SP-10 Independent University

The Universities are acting hereunder as independent contractors and not as agents or employees of the Department or the City of Los Angeles, and all of the terms and conditions of this Agreement shall be interpreted in light of that relationship. The Universities, including University subcontractors, suppliers, employees, and agents, shall not represent or otherwise hold out itself or any of its directors, officers, partners, employees, or agents to be an agent or employee of the Department for any purpose whatsoever. The Universities shall not be entitled to any Department or City of Los Angeles benefits, including but not limited to, vacation, sick leave, Workers' Compensation, or pension.

SP-11 Prohibition Against Assignment or Delegation

The Universities may not, unless it has first obtained the written permission of the Department, such permission may be withheld at the Department's sole discretion for any reason or no reason at all since the award of this Agreement was based upon the personal services to be provided by the Universities

- (a) Assign or otherwise alienate any of its rights hereunder, including the right to payment; or
- (b) Delegate, subcontract, or otherwise transfer any of its duties hereunder.

SP-12 Licenses and Certifications

The Universities and its officers, agents, and employees shall obtain and maintain all licenses, permits, certifications and other documents necessary for the University's performance hereunder and shall pay any fees required therefor. Such licenses, permits, certifications shall be specific to the State of California or regional regulatory agencies, as applicable to the University's services, work, task, and deliverables pursuant to this

EXHIBIT H

Agreement. The Universities agree to immediately notify the Department of any suspension, termination, lapse, non-renewal, or restriction of such licenses, permits, certifications, or other documents.

SP- 13 Non Discrimination/Equal Employment Practices/Affirmative Action

The Universities shall comply with the applicable non-discrimination and affirmative action provisions of the laws of the United States, the State of California, and the City of Los Angeles. In performing this Agreement, the Universities shall not discriminate in its employment practices against any employee or applicant for employment because of such person's race, religion, national origin, ancestry, sex, sexual orientation, age, disability, domestic partner status, marital status or medical condition. The Universities shall also comply with all rules, regulations, and policies of the Department relating to nondiscrimination and affirmative action, including the filing of applicable forms or affirmative action plan.

Any subcontract entered into by the Universities relating to this Agreement, to the extent allowed hereunder, shall be subject to the provisions of this paragraph. Failure of a University to comply with this requirement or to obtain the compliance of its subcontractors with such obligations shall subject the University to the imposition of any and all sanctions allowed by law, including but not limited to termination of this Agreement.

SP-14 Claims for Labor and Materials

Each University shall promptly pay, when due, all amounts payable for labor and materials furnished in the performance of this Agreement so as to prevent any lien or other claim under any provision of law from arising against the Department or City of Los Angeles or any of their respective property (including reports, documents, and other tangible matter produced by the University hereunder), against the University's rights to payments hereunder, and shall pay all amounts due under the Unemployment Insurance Act with respect to such labor.

SP- 15 Los Angeles City Business Tax Registration Certificate Required

Each University represents that it has obtained and presently holds a Business Tax Registration Certificate(s) required by the City of Los Angeles Business Tax Ordinance (Article 1, Chapter II, Section 21.00 and following, of the Los Angeles Municipal Code). For the term covered by this Agreement, the University shall maintain, or obtain as necessary, all such Certificates required under said ordinance and shall not allow any such Certificate to be revoked or suspended.

SP -16 RESERVED

EXHIBIT H

SP-17 Mutual and Proportional Indemnity

Except for the relevant gross negligence or willful misconduct of the indemnified Party or its Indemnitees, and subject to the procedures of any applicable claims statute or law, including without limitation and by way of example, the California Tort Claims Act (Cal. Gov't Code 900 *et seq.*) if applicable, each Party undertakes and agrees to defend, indemnify and hold harmless the other Parties and the City of Los Angeles, and the boards, commissioners, officers, agents, employees, assigns and successors of each (collectively, "Indemnitees") from and against any and all suits and causes of action, claims, losses, demands, penalties, judgments, costs, expenses and disbursements or any kind or nature whatsoever for injury or damages, in any manner arising by reason of, incident to, or connected in any manner to the performance, non-performance or breach of this Project Agreement, but only in proportion to and to the extent such suits and causes of action, claims, losses, demands, penalties, judgments, costs, expenses and disbursements for injury or damages are caused by or result from the negligent or intentional acts of each Party, its boards, officers, agents, employees, assigns and successors in interest. The provisions of this paragraph shall survive the expiration or termination of this Agreement.

SP-18 Insurance

A. General Statement

Acceptable evidence of required insurance, from insurers acceptable to the Department, is required to be submitted by the University and must be maintained current by the Universities throughout the term of this Agreement. Said evidence of insurance must be on file with the Risk Management Section in order to receive payment under any agreement for services rendered, and in order to commence work under this Agreement.

B. Applicable Terms and Conditions

1. Additional Insured Status Required

University shall procure at its own expense, and keep in effect at all times during the term of this Agreement, the types and amounts of insurance specified on the attached Contract Insurance Requirements page. The specified insurance shall also, either by provisions in the policies, by City's own endorsement form or by other endorsement attached to such policies, include and insure City, the Department, the Board, and all of their respective officers, employees and agents, their successors and assigns, as additional insureds (except for Professional Liability and Workers' Compensation), against the area of risk described herein as respects University's acts or omissions in its performance of this

EXHIBIT H

Agreement, hereunder or other related functions performed by or on behalf of University. Such insurance shall not limit or qualify the liabilities and obligations of the Universities assumed under this Agreement.

2. Severability of Interests and Cross Liability Required

Each specified insurance policy (other than Workers' Compensation and Employers' Liability and Property coverage) shall contain a Severability of Interest and Cross Liability clause which states, "It is agreed that the insurance afforded by this policy shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the company's liability," and a Contractual Liability Endorsement which shall state, "Such insurance as is afforded by this policy shall also apply to liability assumed by the insured under this Agreement with the City of Los Angeles."

3. Primary and Non-Contributory Insurance Required

All such insurance shall be Primary and Noncontributing with any other insurance held by the Department where liability arises out of or results from the acts or omissions of a University, its agents, employees, officers, assigns, or any person or entity acting for or on behalf of University. Any insurance carried by the Department which may be applicable shall be deemed to be excess insurance and the University's insurance is primary for all purposes despite any conflicting provision in the University's policies to the contrary.

4. Deductibles Subject to Department's Discretion

Deductibles and/or self-insured retentions shall be at the sole discretion of the Risk Manager of the Department (hereinafter referred to as "Risk Manager"). The Department shall have no liability for any premiums charged for such coverage(s). The inclusion of the Department, its board, and all of its officers, employees and agents, and their agents and assigns, as additional insureds, is not intended to, and shall not, make them, or any of them a partner or joint venturer with a University in its operations.

5. Proof of Insurance for Renewal or Extension Required

At least ten (10) days prior to the expiration date of any of the policies required on the attached Contract Requirement page, documentation showing that the insurance coverage has been

EXHIBIT H

renewed or extended shall be filed with the Department. If such coverage is canceled or reduced in coverage, a University shall, within fifteen (15) days of such cancellation or reduction of coverage, file with the Department evidence that the required insurance has been reinstated or provided through another insurance company or companies.

6. Submission of Acceptable Proof of Insurance and Notice of Cancellation

Universities shall provide proof to the Risk Manager of all specified insurance and related requirements either by production of the actual insurance policy (ies), by use of Department's own endorsement form(s), by other written evidence of insurance acceptable to the Risk Manager, but always in a form acceptable to the Risk Manager and the Office of the City Attorney. The documents evidencing all specified coverage shall be filed with the Department prior to the Universities beginning operations hereunder. Said proof shall contain at a minimum, the applicable policy number, the inclusive dates of policy coverage, the date the protection begins for the Department, and the insurance carrier's name. It shall bear an original signature of an authorized representative of said carrier, and shall provide that such insurance shall not be subject to cancellation, material reduction in coverage or non-renewal except after written notice by certified mail, return receipt requested, to the City Attorney of the City of Los Angeles at least thirty (30) calendar days prior to the effective date thereof. The notification shall be sent by registered mail to: The Office of the City Attorney, Water and Power Division, Post Office Box 51111, JFB Room 340, Los Angeles, California 90051-0100.

7. Claims-Made Insurance Conditions

Should any portion of the required insurance be on a "Claims Made" policy, the Universities shall, at the policy expiration date following completion of work, provide evidence that the "Claims Made" policy has been renewed or replaced with the same limits, terms and conditions of the expiring policy, or that an extended three (3) years discovery period has been purchased on the expiring policy at least for the agreement under which the work was performed.

8. Failure to Maintain and Provide as Cause for Termination

Failure to maintain and provide acceptable evidence of the required insurance for the required period of coverage shall

EXHIBIT H

constitute a breach of contract, upon which the Department may immediately terminate or suspend this Agreement.

9. Periodic Right to Review/Update Insurance Requirements

The Department and Universities agree that the insurance policy limits specified on the attached Contract Insurance Requirements page may be reviewed for adequacy annually throughout the term of this Agreement by the Risk Manager/City Attorney, who may thereafter require the Universities to adjust the amounts and types of insurance coverage however the Risk Manager/City Attorney deems to be adequate and necessary. The Department reserves the right to have submitted to it, upon request, all pertinent information about the agent and carrier providing such insurance, including applicable license and ratings.

10. Specific Insurance Requirements

See Attachment 1, "Contract Insurance Amount Requirements."

C. **Worker's Compensation**

By signing this Agreement, each University hereby certifies that it is aware of the provisions of Section 3700 et. seq., of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and that it will comply with such provisions at all such times as they may apply during performance of the work pursuant to this Agreement.

SP-19 Child Support Policy

The Universities and any subcontractor(s) must fully comply with all applicable State and Federal employment reporting requirements for the Universities and any subcontractor(s)' employees. The Universities and any subcontractor(s) must fully comply with all lawfully served Wage and Earnings Assignment Orders and Notices of Assignment in accordance with the California Family Code. The Universities and any subcontractor(s) must certify that the principal owner(s) thereof (any person who owns an interest of 10 percent or more) are in compliance with any Wage and Earnings Assignment Orders or Notices of Assignment applicable to them personally. The Universities and any subcontractor(s) must certify that such compliance will be maintained throughout the term of this Agreement.

Failure of the Universities and/or any subcontractor(s) to fully comply with all applicable reporting requirements or to implement lawfully served Wage and Earnings Assignments or Notices of Assignment or failure of the principal owner(s) to comply with any Wage

EXHIBIT H

and Earnings Assignments or Notices of Assignment applicable to them personally shall constitute a default under this Agreement. Failure of the University and/or any subcontractor(s) or principal owner(s) thereof to cure the default within ninety (90) calendar days of notice of such default by the Department shall subject this Agreement to termination.

The Universities will contractually require all subcontractors performing services under this Agreement to comply with the provisions of this section.

SP-20 Service Contract Worker Retention Ordinance and Living Wage Policy

Each Party agrees to follow all applicable federal and state laws and regulations concerning wages and worker retention, and to require all subcontractors receiving funds under this Project Agreement to likewise follow all applicable and federal state laws concerning the same.

SP-21 American with Disabilities Act

The Universities hereby certifies that they will comply with the Americans with Disabilities Act 42, U.S.C. Section 12101 et seq., and its implementing regulations. The Universities will provide reasonable accommodations to allow qualified individuals with disabilities to have access to and to participate in its programs, services and activities in accordance with the provisions of the Americans with Disabilities Act. The Universities will not discriminate against persons with disabilities nor against persons due to their relationship or association with a person with a disability. Any subcontract entered into by a University, relating to this Agreement, to the extent allowed hereunder, shall be subject to the provisions of this paragraph.

SP-22 Standard Provisions for Department of Water and Power – Retention of Records, Audit, and Reports (revised October 16, 2007)

Universities shall maintain, and shall cause University subcontractors and suppliers as applicable to maintain all records pertaining to the management of this Agreement and, related subcontracts, and performance of services pursuant to this Agreement, in their original form, including but not limited to, reports, documents, deliverables, employee time sheets, accounting procedures and practices, records of financial transactions, and other evidence, regardless of form (e.g., machine readable media such as disk, tape, etc.) or type (e.g., databases, applications software, database management software, utilities, etc.), sufficient to properly reflect all costs claimed to have been incurred and services performed pursuant to this Agreement. If a University, the University's subcontractors and/or suppliers are required to submit cost or pricing data in connection with this Agreement, the University must maintain all records and documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used. All records shall be retained, and shall be subject to examination and audit by Department personnel or by the Department's agents (herein after

EXHIBIT H

“Authorized Auditors”), for a period of not less than four (4) years following final payment made by the Department hereunder or the expiration date of this Agreement, whichever is later.

The Universities shall make said records or to the extent accepted by the Authorized Auditors, photographs, micro-photographs, etc. or other authentic reproductions thereof, available to the Authorized Auditors at the University’s offices at all reasonable times and without charge. The Authorized Auditors will have the right to reproduce, photocopy, download, transcribe, and the like any such records. Any information provided by a University on machine-readable media shall be provided in a format accessible and readable by the Authorized Auditors. The Universities shall not, however, be required to furnish the Authorized Auditors with commonly available software.

Universities, and University subcontractors and suppliers, as applicable to the services provided under this Agreement, shall be subject at any time with fourteen (14) calendar days prior written notice to audits or examinations by Authorized Auditors, relating to all billings and to verify compliance with all Agreement requirements relative to practices, methods, procedures, performance, compensation, and documentation.

Examinations and audits will be performed using generally accepted auditing practices and principles and applicable City, State and Federal government audit standards. For Universities that utilize or are subject to FAR, Part 30 and 31, et seq. accounting procedures, or a portion thereof, examinations and audits will utilize such information.

To the extent that the Authorized Auditor’s examination or audit reveals inaccurate, incomplete or non-current records, or records are unavailable, the records shall be considered defective.

Consistent with standard auditing procedures, the Universities will be provided fifteen (15) calendar days to review the Authorized Auditor’s examination results or audit and respond to the Department prior to the examination’s or audit’s finalization and public release.

If the Authorized Auditor’s examination or audit indicates that a University has been overpaid under a previous payment application, the identified overpayment amount shall be paid by the University to the Department within fifteen (15) calendar days of notice to the University of the identified overpayment.

The Universities shall contractually require all subcontractors performing services under this Agreement to comply with the provisions of this section by inserting this provision SP- 22 in each subcontractor contract and by contractually requiring each subcontractor to insert this provision SP-22 in any of its subcontractor contracts related to services under this Agreement. In addition, Universities and subcontractors shall also include the following language in each subcontractor contract:

“The Department of Water and Power is a third party beneficiary of the foregoing audit provision. The benefits of the audit provision shall inure solely for the

EXHIBIT H

benefit of the Department of Water and Power. The designation of the Department of Water and Power as a third party beneficiary of the audit provision shall not confer any rights or privileges on the University, subcontractor or any other person/entity.”

The provisions of this section shall survive expiration or termination of this Agreement.

SP-23 University Responsibility

By signing this Agreement the Universities pledge, under penalty of perjury, to comply with all applicable federal, state, and local laws in the performance of this Agreement, including but not limited to, laws regarding health and safety, labor and employment, wages and hours, and licensing laws which effect employees. The Universities further agree to provide written notice to the Department within thirty (30) calendar days after being notified or acquiring knowledge of the following: 1) that any government agency has initiated an investigation which may result in a finding that the University, or any of its subcontractors of any tier, is not in compliance with any applicable federal, state, and local laws in the performance of this Agreement; 2) all findings by a government agency or court of competent jurisdiction that the University, or any of its subcontractors of any tier, has violated any applicable federal, state, and local laws.

Further, by signing this Agreement the Universities pledge, under penalty of perjury, that the Universities have not been found by a court of competent jurisdiction to have violated the California or Federal False Claims Act with an act of moral turpitude or committed a crime involving moral turpitude. The Universities further agree to notify the Department within thirty (30) calendar days of any adverse finding by a court of competent jurisdiction related to a University’s violation of the California or Federal False Claims Act with an act of moral turpitude or committed a crime involving moral turpitude.

The Universities shall contractually obligate all University subcontractors to comply with all applicable federal, state, and local laws in the performance of this Agreement and report any governmental agency investigations or violations of such applicable federal, state, and local laws or violations of the California or Federal False Claims Act to the Department, consistent with the provisions of this Section.

SP-24 RESERVED

SP-25 RESERVED

SP-26 RESERVED

EXHIBIT H

SP-27 Department of Water and Power's Recycling Policy

The Universities shall submit all written documents on paper with a minimum of thirty (30) percent post-consumer recycled content. Existing company/corporate letterhead/stationery that accompanies these documents is exempt from this requirement. Documents of two or more pages in length shall be duplex-copied (double-sided pages). Neon or fluorescent paper shall not be used in any written documents submitted to the Department.

SP-28 Employer Identification Number (EIN)

The Universities represent that they have obtained and presently have a Employer Identification Number (EIN). For the term covered by this Agreement, the Universities shall maintain, or obtain as necessary, a EIN. No payment will be made under this Agreement without a valid EIN number.

SP-29 Beneficiaries

This Agreement is intended only for the benefit of the Parties hereto and does not, nor shall be interpreted to, create any rights in any nonsignatory to this Agreement.

SP-30 University Successors and Assigns

All indemnifications and warranties provided by the Universities pursuant to this Agreement will be assumed by and binding upon University successors and assigns. The provisions of this paragraph shall survive expiration or termination of this Agreement.

SP-31 Attorney's Fees and Costs

Both Parties hereto agree that in any action to enforce the terms of this Agreement, each Party shall be responsible for its own attorneys' fees and costs. The provisions of this paragraph shall survive expiration or termination of this Agreement.