

U.S DEPARTMENT OF ENERGY
NOTICE OF FINANCIAL ASSISTANCE AWARD

(11/04)

Under the authority of Public Law 109-58, Energy Policy Act (2005)

1. PROJECT TITLE: Ann Arbor Solar Cities Partnership
2. INSTRUMENT TYPE: COOPERATIVE AGREEMENT
3. RECIPIENT: City of Ann Arbor, 100 N. Fifth Ave., Ann Arbor, MI 48104
4. INSTRUMENT NO.: DE-FC36-07GO17068
5. AMENDMENT NO.: A000
6. BUDGET PERIOD: FROM: 09/01/2007 THRU: 08/30/2009
7. PROJECT PERIOD: FROM: 09/01/2007 THRU: 08/30/2009
8. RECIPIENT PROJECT DIRECTOR: David Konkle, Phone: 734-996-3150, E-Mail: dkonkle@a2gov.org
9. RECIPIENT BUSINESS OFFICER: David Konkle, Phone: 734-996-3150, E-Mail: dkonkle@a2gov.org
10. TYPE OF AWARD: NEW
11. DOE PROJECT OFFICER: Steve Palmeri, Phone: 303-275-4832, E-Mail: Steve.Palmeri@go.doe.gov
12. DOE AWARD ADMINISTRATOR: Patrick R. Liles, Phone: 303-275-4921, E-Mail: pat.liles@go.doe.gov

13. RECIPIENT TYPE: LOCAL GOVT, INDIAN TRIBAL GOV'T, HOSPITAL, FOR PROFIT ORGANIZATION, INDIVIDUAL, INSTITUTION OF HIGHER EDUCATION, OTHER NONPROFIT ORGANIZATION, C P SP, OTHER (Specify):

14. ACCOUNTING AND APPROPRIATIONS DATA: Table with columns: Fund, Year, Allottee, Reporting Entity, SGL, Object Class, Project, Program, WFO, Local Use, Dollar Amount. Includes EMPLOYER I.D. a. TIN: 386 004 534, b. DUNS: 004913166

16. BUDGET AND FUNDING INFORMATION: a. CURRENT BUDGET PERIOD INFORMATION, b. CUMULATIVE DOE OBLIGATIONS. Includes tables for DOE Funds Obligated, Authorized, and Total Approved Budget.

17. TOTAL ESTIMATED COST OF PROJECT, INCLUDING DOE FUNDS TO FFRDC: \$ 435,003.00
(This is the current estimated cost of the project. It is not a promise to award nor an authorization to expend funds in this amount.)

18. AWARD/AGREEMENT TERMS AND CONDITIONS: This award/agreement consists of this form plus the following: a. Special terms and conditions. b. Applicable program regulations (Specify) N/A (Date). c. DOE Assistance Regulations, 10 CFR Part 600 at http://ecfr.gpoaccess.gov or, if the award is a grant to a Federal Demonstration Partnership (FDP) institution, the FDP Terms and Conditions and the DOE FDP Agency Specific Requirements at http://www.nsf.gov. d. Application/proposal as approved by DOE. e. National Policy Assurances to be incorporated as Award Terms in effect on date of award at http://grants.pr.doe.gov.

19. REMARKS: In addition to this Notice of Financial Assistance Award, DOE F 4600.1, the award is comprised of: Special Terms and Conditions (Attachment 1); Intellectual Property Provisions, NRD-1003 (Attachment 2); Budget Information - Non-Construction Programs, SF424A (Attachment 3); Federal Assistance Reporting Checklist and Instructions, DOE F 4600.2 (Attachment 4); and the Statement of Project Objectives (Attachment 5).

20. EVIDENCE OF RECIPIENT ACCEPTANCE: (Signature of Authorized Recipient Official), (Date), (Name), (Title). 21. AWARDED BY: Margo A. Gorin, 9/18/07, (Signature), (Date), (Name), Contracting Officer, (Title).

Special Terms and Conditions

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Special Terms and Conditions for Use in Most Grants and Cooperative Agreements

1. 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 identified in Block 12 of the Notice of Financial Assistance Award for guidance.

2. PAYMENT PROCEDURES – ADVANCES THROUGH THE AUTOMATED STANDARD APPLICATION FOR PAYMENTS (ASAP) SYSTEM

a. Method of Payment. Payment will be made by advances through the Department of Treasury's ASAP system.

b. Requesting Advances. Requests for advances must be made through the ASAP system. You may submit requests as frequently as required to meet your needs to disburse funds for the Federal share of project costs. If feasible, you should time each request so that you receive payment on the same day that you disburse funds for direct project costs and the proportionate share of any allowable indirect costs. If same-day transfers are not feasible, advance payments must be as close as is administratively feasible to actual disbursements.

c. 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.

d. Payments. All payments are made by electronic funds transfer to the bank account identified on the ASAP Bank Information Form that you filed with the U.S. Department of Treasury.

3. 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 incurred 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 Date	Government Share \$ / %	Recipient Share \$ / %	Total Estimated Cost
1	09/01/2007	\$200,000 / 46%	\$235,003 / 54%	\$435,003
Total Project		\$200,000 / 46%	\$235,003 / 54%	\$435,003

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 identified in Block 12 of the Notice of Financial Assistance Award 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. 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 of some or all the funds provided under the award.

4. STATEMENT OF FEDERAL STEWARDSHIP

DOE 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 insure that the award objectives have been accomplished.

5. STATEMENT OF SUBSTANTIAL INVOLVEMENT

The City Strategic Partnerships project(s) awarded under this program are associated with numerous separate solar program elements for implementation of the Solar America Initiative. In order to implement each program element in a consistent and uniform manner, DOE must collaborate with each entity in the program, and also foster collaboration and coordination between all entities. DOE also provides additional monitoring to permit specified kinds of direction or redirection of each entity's work due to interrelationships between projects and/or critical programmatic goals.

6. SITE VISITS

DOE 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.

7. 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. In addition, these reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Citations for journal articles produced under the award will appear on the DOE Energy Citations Database (www.osti.gov/energycitations).

8. 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 [National Nuclear Security Administration] [add name(s) of other agencies, if applicable] under Award Number(s) [enter the award number(s)]."

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."

9. 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.

10. INTELLECTUAL PROPERTY PROVISIONS AND CONTACT INFORMATION

The intellectual property provisions applicable to this award are provided as an attachment to this award or are referenced in Block 19 of the Notice of Financial Assistance Award (NFAA). Questions regarding intellectual property matters should be referred to Patent Counsel through the Award Administrator identified in Block 12 of the NFAA.

11. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

You are restricted from taking any action using Federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE providing either a NEPA clearance or a final NEPA decision regarding this project. Prohibited actions include, but are not limited to, demolition of existing buildings, site clearing, ground breaking, construction, and/or detailed design. This restriction includes

Task 3.0, Subtask 3.1 and Subtask 3.2. You are required to submit an additional EF1 Environmental Checklist for each solar installation in Task 3.0.

Task 3.0 activities are required to undergo DOE's NEPA review process by completing an additional EF1 Environmental Checklist for each solar installation site and receive notification of approval from the DOE Contracting Officer prior to commencing with work.

This restriction does not preclude you from completing Tasks 1, 2, and 4 through 10.

12. 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.

13. 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.

14. ADVANCE UNDERSTANDING CONCERNING TECHNICAL ASSISTANCE TO BE PROVIDED BY NATIONAL LABORATORY TIGER TEAMS

The Department of Energy (DOE) is offering Technical Assistance (TA) to the Recipient under an associated Memorandum of Agreement (MOA) for the Solar America Initiative, Market Transformation Project. DOE will establish a Tiger Team comprised of DOE National Laboratory employees and their contractors, who will provide the technical assistance to the Recipient.

The Recipient may request TA by submitting a written request for Tiger Team support to the DOE Project Officer designated in Block 11 of the NFAA. The Tiger Team, designated by DOE, will assess the request for TA and will determine the level of support that the Tiger Team is capable of providing. The Tiger Team will propose to the DOE Project Officer a Statement of Technical Assistance and the amount of TA in Projected Levels of Commitment. DOE will then provide to the Recipient an approved Statement of Technical Assistance and the amount of TA in Projected Levels of Commitment for the Recipients review and concurrence.

Once the Levels of Commitment are incorporated into the Memorandum of Agreement, the scope of work and hours will not be changed except by mutual agreement between the DOE Contracting Officer, the Recipient, and the Tiger Team Lead.

At any time during the course of the MOA, a request for additional or revised TA may be submitted by the Recipient by following the established protocol.

15. ADVANCE UNDERSTANDING CONCERNING LIMITATION OF INDIRECT COSTS AND FRINGE COSTS

The budget for this award includes fringe benefits for the City of Ann Arbor Energy Office Staff, but does not include fringe benefits for any other project participants that work for the City of Ann Arbor. Additionally, the budget does not include indirect costs. Therefore, fringe costs from other city offices and any indirect costs shall not be charged to nor shall reimbursement be requested for this project. Furthermore, indirect and fringe costs for this project shall not be allocated to any other federally sponsored project. In addition, indirect or fringe costs shall not be counted as cost share unless approved by the Contracting Officer.

**Intellectual Property Provisions (NRD-1003)
Nonresearch and Development**

Nonprofit organizations are subject to the intellectual property requirements at 10 CFR 600.136(a), (c) and (d). All other organizations are subject to the intellectual property requirements at 10 CFR 600.136(a) and (c).

600.136 Intangible property.

(a) Recipients may copyright any work that is subject to copyright and was developed, or for which ownership was purchased, under an award. DOE reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish or otherwise use the work for Federal purposes, and to authorize others to do so.

(c) DOE has the right to:

(1) Obtain, reproduce, publish or otherwise use the data first produced under an award; and

(2) Authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.

(d) In addition, in response to a Freedom of Information act (FOIA) request for research data relating to published research findings produced under an award that were used by the Federal Government in developing an agency action that has the force and effect of law, the DOE shall request, and the recipient shall provide, within a reasonable time, the research data so that they can be made available to the public through the procedures established under the FOIA. If the DOE obtains the research data solely in response to a FOIA request, the agency may charge the requester a reasonable fee equaling the full incremental cost of obtaining the research data. This fee should reflect the costs incurred by the agency, the recipient, and applicable subrecipients. This fee is in addition to any fees the agency may assess under the FOIA (5 U.S.C. 552(a)(4)(A)).

Budget Information - Non Construction Programs

OMB Approval No.0348-0044

Section A - Budget Summary		Estimated Unobligated Funds				New or Revised Budget		Total (g)
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)		
1. Solar Cities	81.117			\$200,000.00	\$235,003.00	\$435,003.00		
2.								
3.								
4.								
5 Totals		\$0.00	\$0.00	\$200,000.00	\$235,003.00	\$435,003.00		
Section B - Budget Categories								
		Grant Program, Function or Activity						
6. Object Class Categories		(1) Solar Cities	(2)	(3)	(4)	Total (5)		
a. Personnel		\$30,990.00				\$30,990.00		
b. Fringe Benefits		\$5,108.00				\$5,108.00		
c. Travel		\$2,400.00				\$2,400.00		
d. Equipment		\$0.00				\$0.00		
e. Supplies		\$6,000.00				\$6,000.00		
f. Contractual		\$187,155.00				\$187,155.00		
g. Construction		\$0.00				\$0.00		
h. Other Installations, etc.		\$203,350.00				\$203,350.00		
i. Total Direct Charges (sum of 6a-6h)		\$435,003.00				\$435,003.00		
j. Indirect Charges		\$0.00				\$0.00		
k. Totals (sum of 6i and 6j)		\$435,003.00				\$435,003.00		
7. Program Income						\$0.00		

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

1. Identification Number: DE - FC36 - 07GO17068.A000		2. Program/Project Title: Ann Arbor Solar Cities Partnership	
3. Recipient: City of Ann Arbor			
4. Reporting Requirements:		Frequency	No. of Copies
A. MANAGEMENT REPORTING			
<input checked="" type="checkbox"/> Progress Report		F Q	Upload one copy of each report to the addresses identified in the next column
<input checked="" type="checkbox"/> Special Status Report (see special instructions)		A	
B. SCIENTIFIC/TECHNICAL REPORTING (Reports/Products must be submitted with appropriate DOE F 241. The forms are available at www.osti.gov/clink)			
Report/Product	Form		
<input type="checkbox"/> Final Scientific Report	DOE F 241.3		http://www.osti.gov/clink-2413 https://www.eere-pmc.energy.gov/SubmitReports.aspx http://www.osti.gov/estsc/241-4pre.jsp
<input checked="" type="checkbox"/> Conference papers/proceedings*	DOE F 241.3	A	
<input type="checkbox"/> Software/Manual	DOE F 241.4		
<input type="checkbox"/> Other (see special instructions)	DOE F 241.3		
* Scientific and technical conferences only			
C. FINANCIAL REPORTING			
<input type="checkbox"/> SF-269, Financial Status Report			https://www.eere-pmc.energy.gov/SubmitReports.aspx
<input checked="" type="checkbox"/> SF-269A, Financial Status Report (short form)		F Q	
<input checked="" type="checkbox"/> SF-272, Federal Cash Transaction Report		F Q	
D. CLOSEOUT REPORTING			
<input type="checkbox"/> Patent Certification			https://www.eere-pmc.energy.gov/SubmitReports.aspx
<input checked="" type="checkbox"/> Property Certification		F	
<input checked="" type="checkbox"/> Other (see Special Instructions)		F	
E. OTHER REPORTING			
<input checked="" type="checkbox"/> Annual Indirect Cost Proposal		Y	
<input type="checkbox"/> Annual Inventory of Federally Owned Property, If Any			
<input checked="" type="checkbox"/> Other (see special instructions)		A Y Q	
FREQUENCY CODES AND DUE DATES: A - Within 5 calendar days after events or as specified. F - Final; 90 calendar days after expiration or termination of the award. Y - Yearly; 90 days after the end of the reporting period. S - Semiannually; within 30 days after end of the reporting period. Q - Quarterly; within 30 days after end of the reporting period.			
5. Special Instructions: The forms identified in the checklist are available at http://grants.pr.doe.gov . OTHER REPORTING Other reports as requested by DOE (A) Participation in SETP Annual Peer Review (Y) Contribution to SETP Annual Report (Y) Spend Plan (Q) NOTE: In general, all reports should be written for public disclosure. Reports should not contain any proprietary or classified information, other information not subject to release, or any information subject to export control classification. If a report contains such information, notify DOE within the report itself. MANAGEMENT REPORTING: a) Progress Report: Include management aspects of the project. b) Special Status Report: Provide notice of problems, delays, or adverse conditions, which materially impair the recipient's ability to meet the objectives of the award or developments that have a significant impact on the project. The report must include the remedial action to be taken to correct or resolve any problems or adverse action. OTHER REPORTING: Other reports as requested by DOE (A) Participation in SETP Annual Peer Review (Y) Contribution to SETP Annual Report (Y) Spend Plan (Q) CLOSEOUT REPORTING: Final Narrative Report (F)			

Federal Assistance Reporting Instructions (05/06)

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 Project Officer identified in Block 11 of the Notice of Financial Assistance Award.
 - 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 as soon as possible after they occur. Submit reports by e-mail to the DOE Project Officer identified in Block 11 of the Notice of Financial Assistance Award (NFAA):

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. For example, 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 or regulations.
 - 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 valued in excess of \$50,000.
 - g. Any other incident that has the potential for high visibility in the media.

B. SCIENTIFIC/TECHNICAL REPORTS

Final Scientific/Technical Report

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

1. Identify the DOE award number; name of recipient; project title; name of project director/principal investigator; and consortium/teaming members.

2. Display prominently on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data. Reports delivered without such notices may be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports.
3. Provide an executive summary, which includes a discussion of 1) how the research adds to the understanding of the area investigated; 2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or 3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.
4. Provide a comparison of the actual accomplishments with the goals and objectives of the project
5. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.
6. Identify products developed under the award and technology transfer activities, such as:
 - a. Publications (list journal name, volume, issue), conference papers, or other public releases of results. If not provided previously, attach or send copies of any public releases to the DOE Project Officer identified in Block 11 of the Notice of Financial Assistance Award;
 - b. Web site or other Internet sites that reflect the results of this project;
 - c. Networks or collaborations fostered;
 - d. Technologies/Techniques;
 - e. Inventions/Patent Applications, licensing agreements; and
 - f. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.
7. For projects involving computer modeling, provide the following information with the final report:
 - a. Model description, key assumptions, version, source and intended use;
 - b. Performance criteria for the model related to the intended use;
 - c. Test results to demonstrate the model performance criteria were met (e.g., code verification/validation, sensitivity analyses, history matching with lab or field data, as appropriate);
 - d. Theory behind the model, expressed in non-mathematical terms;
 - e. Mathematics to be used, including formulas and calculation methods;

- f. Whether or not the theory and mathematical algorithms were peer reviewed, and, if so, include a summary of theoretical strengths and weaknesses;
- g. Hardware requirements; and
- h. Documentation (e.g., users guide, model code).

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

Electronic Format. Reports must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. Materials, such as prints, videos, and books, that are essential to the report but cannot be submitted electronically, should be sent to the DOE Award Administrator at the address listed in Block 12 of the Notice of Financial Assistance Award.

Submittal Form. The report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)." You can complete, upload, and submit the DOE F.241.3 online via E-Link. You are encouraged not to submit patentable material or protected data in these reports, but if there is such material or data in the report, you must: (1) clearly identify patentable or protected data on each page of the report; (2) identify such material on the cover of the report; and (3) mark the appropriate block in Section K of the DOE F 241.3. Reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Protected data is specific technical data, first produced in the performance of the award that is protected from public release for a period of time by the terms of the award agreement.

Conference Papers/Proceedings

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

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

Electronic Format. Conference papers/proceedings must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts. If the proceedings cannot be submitted electronically, they should be sent to the DOE Award Administrator at the address listed in Block 12 of the Notice of Financial Assistance Award.

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

Software/Manual

Content. Unless otherwise specified in the award, the following must be delivered: source code, the executable object code and the minimum support documentation needed by a competent user to understand and use the software and to be able to modify the software in subsequent development efforts.

Electronic Submission. Submissions may be submitted electronically via the DOE Energy Link System (E-Link) at <http://www.osti.gov/estsc/241-4pre.jsp>

Energy Science and Technology Software Center
P.O. Box 1020
Oak Ridge, TN 37831

Submittal Form. Each software deliverable and its manual must be accompanied by a completed DOE Form 241.4 "Announcement of U.S. Department of Energy Computer Software." The form and instructions are available on E-Link at <http://www.osti.gov/estsc//241-4pre.jsp>.

C. FINANCIAL REPORTING

Recipients must complete the financial reports identified on the Reporting Checklist in accordance with the report instructions. These standard forms are available at <http://www.whitehouse.gov/omb/grants/index.html>. Fillable forms are available at <http://grants.pr.doe.gov>.

D. CLOSEOUT REPORTS

Final Invention and Patent Report

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

Property Certification

The recipient must provide the Property Certification, including the required inventories of non-exempt property, located at <http://grants.pr.doe.gov>.

E. OTHER REPORTING

Annual Indirect Cost Proposal and Reconciliation

Requirement. In accordance with the applicable cost principles, the recipient must submit an annual indirect cost proposal, reconciled to its financial statements, within six months after the close of the fiscal year, unless the award is based on a predetermined or fixed indirect rate (s), or a fixed amount for indirect 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 Award Administrator identified in Block 12 of the Notice of Financial Assistance Award.

Annual Inventory of Federally Owned Property

Requirement. If at any time during the award the recipient is provided with 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 Award Administrator identified in Block 12 of the Notice of Financial Assistance Award 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 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.

STATEMENT OF PROJECT OBJECTIVES

City of Ann Arbor

Ann Arbor Solar City Partnership

A. PROJECT OBJECTIVES

The goal for this program is to utilize a wide range of community partners and resources to remove market barriers to the adoption of solar energy while simultaneously increasing consumer awareness and demand, and helping solar energy manufacturers and contractors to succeed. If Ann Arbor, a city known more for clouds than sunshine, can become a "Solar City" and demonstrate that solar energy can provide a positive contribution to the community in jobs and clean, renewable energy, then any city in the US can follow our lead. Expected outcomes include a Solar Plan for Ann Arbor, one or more large-scale photovoltaic demonstration projects, more small-scale solar hot water and photovoltaic demonstration projects, greater consumer awareness of solar options, a simpler permitting process for solar projects, and proof that solar energy works even in cloudy cities.

B. PROJECT SCOPE

The wide-ranging collaborative assembled by the Ann Arbor Energy Office for this project demonstrates a city and a state eager to support the development of solar energy. A part of DOE's Solar America Initiative, this Solar America Cities project has two core components: (1) a comprehensive, year-long, planning project resulting in the development of a Solar Plan for the City of Ann Arbor, and (2) aggressive implementation of a variety of policy and program activities.

With the Mayor and City Council establishing a goal of 20% renewable energy for the whole Ann Arbor community by 2015, the implementation of a comprehensive plan to develop local solar energy resources fits well into this community motivated to move its businesses and residents to sustainable energy use. Highlights of the plan include: workshops for consumers and solar energy installers; the implementation of a community based marketing campaign; incentives and rebates offered to residential and commercial consumers; a contest to win solar hot water and photovoltaic energy systems; programming in the Ann Arbor public schools; technical assistance provided for new major commercial solar installations; technical and business training for solar installers and much more.

C. TASKS TO BE PERFORMED

:: PHASE 1: DEVELOPING A SOLAR PLAN FOR ANN ARBOR ::

Task 1.0 Develop a Solar Plan to Identify and Reduce Barriers to Solar

The City of Ann Arbor will take a comprehensive approach towards identifying and reducing barriers to the adoption of solar energy through the creation and implementation of a detailed Solar Plan. Our proposal's Criterion One Work Plan has one deliverable: a comprehensive Solar Plan for solar energy market transformation to be implemented in the City of Ann Arbor that can be easily replicated in other communities across Michigan and the Midwest. This plan will be the result of a yearlong planning effort and will involve extensive outreach in the Ann Arbor community and beyond.

Subtask 1.1 Conduct interviews with key market actors

The market actor interviews are designed to provide perspective on key solar energy market components. These interviews will be conducted by phone or in person and will involve extended conversations with solar energy installers, builders, homeowners, government officials and staff, and other key market segments.

Subtask 1.2 Conduct focus groups with building industry professionals and homeowners

A focus group is a form of qualitative research in which a group of people is asked about their attitude toward a product, concept, advertisement, idea, or packaging. In this particular case, the product we will be talking about is solar energy systems and the perceived barriers to the adoption of solar energy systems by local builders and homeowners. The focus group sessions will allow for questions to be asked in an interactive group setting where participants are free to talk with other group members.

Subtask 1.3 Perform literature review

The literature review aims to assess the critical points of current knowledge on solar energy market transformation efforts implemented across the country, paying particular attention to efforts spearheaded by municipalities. It is anticipated that the primary reports used in the literature review will be written case study reports. The literature review will describe, summarize, evaluate, clarify and/or integrate the content of primary reports studied.

Subtask 1.4 Perform baseline market research on solar energy sales and incentives in local and national context

Market research is the process of systematic gathering, recording, and analyzing of data about customers, competitors, and the market. In order to fine tune our project to the Ann Arbor market, we will learn more about current and potential solar customers, market forces, and trends both locally and nationally.

Subtask 1.5 Define and refine Solar Plan goals, objectives, & strategies

The planning process detailed in the City of Ann Arbor's proposal presents a rational, broad-scale exploration of alternatives, which will lead to a sound Solar Plan for solar energy market transformation. Information gathered will be used to develop goals focused on desired market changes, with supporting objectives and strategies, which chart a course of action to ensure that stated goals are met.

Subtask 1.6 Provide a final review of results; generate final Ann Arbor Solar Plan based on the results of prior tasks

The culmination of a twelve-month planning process, the final Ann Arbor Solar Plan will complete the planning phase of this project and will lead directly to focused program implementation activities in year two of the project.

Task 2.0 Expanding The Plan To Other Jurisdictions

The City of Ann Arbor and its strategic partners are committed to sharing the results of this project with municipalities across the state and country. Our project partners have a built-in network with statewide reach for information sharing and have committed to do so. Moving beyond Michigan, the Project's Administrator, is a sought after speaker for conferences and as such is invited to speaking engagements nationally. At these events, the Project Administrator is given a platform to teach others across the country

about energy innovations begun in Ann Arbor. The partners in this Solar City project have a strong interest in implementing similar solar projects in municipalities across the State.

:: PHASE 2: PROGRAM AND POLICY IMPLEMENTATION ::

Task 3.0 Proposed Commercial and Residential Solar Installations

Highly visible solar installations are one key to demonstrating the value of solar energy to area residents and businesses.

Subtask 3.1 Work with opinion leading Ann Arbor companies and organizations to successfully complete visible commercial solar installations

An opinion leader is an organization or individual that is held in high esteem by those that accept their opinions. The Ann Arbor community is rich in opinion leaders locally and also has many opinion leaders active on the state and national scenes as well. We will target key opinion leaders in the community for high profile installations of commercial solar equipment and market their efforts to increase the visibility of implemented projects.

Subtask 3.2 Work with Ann Arbor opinion leaders to successfully complete visible residential solar installations

We will target key opinion leaders in the local community for high profile installations of solar equipment and market their efforts to increase the visibility of the projects.

Task 4.0 Integrating Solar Into City Facility Planning & Emergency Preparedness

The City will explore opportunities for one or more large-scale photovoltaic projects at City facilities, as well as opportunities for smaller scale installations at facilities or as part of emergency preparedness measures.

Subtask 4.1 Solar in City Facility Planning

The Energy Coordinator will be working with all facility managers and planners on a one-to-one basis to examine each facility for opportunities for solar energy use, either solar electric or solar thermal. This comprehensive survey is to be completed in 2007. If a viable opportunity is found, the up-front cost may be funded through the City's Energy Fund, a revolving loan fund that pays for energy improvements.

Subtask 4.2 Integrating Solar into Emergency Preparedness

The City's Office of Emergency Management will thoroughly examine how solar energy can play an important role in providing long-term backup power and self-sufficiency of critical operations.

Task 5.0 City Level Solar Incentives

The opportunity to offer rebates, property tax abatements, and incentives through the building permit, plan review and inspection processes will be explored in the development of the project's Solar Plan. These incentives will be implemented in year two. Other specific incentives already identified are listed in the subtasks below.

Subtask 5.1 Implement aggregated group purchasing program for Ann Arbor residents and businesses

We will aggressively market an expansion of an existing education and aggregated group purchasing program through paid and free media over the project's two-year timeframe. The marketing campaign will include information of the benefits of solar electricity and solar hot water use.

Subtask 5.2 Explore opportunities for funding local incentive program

The City is committed to exploring ways to raise funding to be used for incentives for the implementation of solar and other renewable energy in Ann Arbor. This includes the possibility of bringing a renewable energy millage before Ann Arbor's voters that could be used in part to provide incentives.

Subtask 5.3 Rebates and incentives offered to the community

In the second year of this project we will offer rebates and incentives for residential and commercial solar installations to generate additional enthusiasm in the community for solar energy. One goal of the Ann Arbor Solar Plan will be to find a sustainable funding source to continue this rebate and incentive program beyond the project's two-year time frame.

Task 6.0 Solar Friendly Regulatory Opportunities: Implement policy recommendations from Ann Arbor Solar Plan

At the end of year one, the Ann Arbor Solar Plan will be completed after the extensive participation of project strategic partners. The goals, objectives, and strategies covered in this plan will outline a path forward for policy changes leading to solar energy market transformation in Ann Arbor

Task 7.0 Integration of Energy Efficiency & Renewable Energy Into K-12 Curriculum

Subtask 7.1 Deliver MEECS training to teachers in the Ann Arbor area

The Department of Environmental Quality's Michigan Environmental Education Curriculum Support (MEECS) program was developed in 2005 by Central Michigan University. Project partners will deliver teacher training on the MEECS Energy Resources Chapter to teachers in the Ann Arbor area.

Subtask 7.2 Hold school assemblies to launch solar cooker contest

Project partners will hold a solar cooker design contest with participating classrooms and deliver a Science Wonders assembly to the school (not just participating grades/classes) on energy and renewable energy.

Task 8.0 Development of Solar Installer Training: Train local solar energy installers trade skills and successful business development practices

Project partners will train solar energy system businesses and installers to develop the Ann Arbor solar energy market. Many of the current renewable energy installers are struggling with how to grow their business and handle increasing demand for solar energy systems. To meet this emerging need we will deliver a seminar series on business development topics, including planning for growth.

Task 9.0 Public Promotion**Subtask 9.1 Create educational mobile solar exhibit for display at venues in Ann Arbor and beyond**

We will create a mobile exhibit on solar energy to educate the public on solar energy, its uses, and value. The exhibit will be designed in such a manner that it can be shown in a variety of venues to increase its visibility and outreach effect. Anticipated venues include indoors at schools, libraries, corporate facilities, governmental offices, and outdoors at Earth Day festivals, the Ann Arbor Green Fair, and the Ann Arbor Art Fair.

Subtask 9.2 Launch, manage, and complete "Go Solar!" contest

As a means of raising community awareness of solar energy, we will launch a "Go Solar!" contest for area homeowners and businesses. We will offer one complete solar hot water heater system and two complete, small-scale photovoltaic systems to selected contest winners.

Subtask 9.3 Utilize Michigan Solar House (MiSo house) as platform for community education and ongoing research activities

The MiSo House is an interdisciplinary research project at the University of Michigan in Ann Arbor. The project centers on an 800 square foot, solar-powered house that was designed and built to compete in the 2005 Solar Decathlon. Project partners are presently considering ways in which the house may be used for daily Solar City activities as well as ongoing public education.

Subtask 9.4 Develop and refine marketing tools for community based social marketing campaign

Information gathered from Phase One activities will be used to develop overall Solar City campaign marketing materials for print and web applications.

Subtask 9.5 Develop, refine, and implement marketing strategy

The Solar City campaign initiated in this project will, at all times, strive to ensure that all marketing efforts are targeted toward Innovators and Early Adopters, for reaching these individuals is the only way one can expect to increase solar energy market share.

Subtask 9.6 Implement program recommendations from Ann Arbor Solar Plan

At the end of year one of this project's implementation, the Ann Arbor Solar Plan will be completed after extensive participation of project strategic partners. The goals, objectives, and strategies covered in this plan will outline a programmatic path forward for solar energy market transformation in Ann Arbor to be initiated in year two.

Task 10.0 Project Management and Reporting

Regular reports will be made to DOE project officers describing progress made to date. Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.