



# Federal Register

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**Monday,  
March 28, 2005**

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**Part II**

## **Department of Agriculture**

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**Rural Development; Notice of Funds  
Availability (NOFA) Inviting Applications  
for the Renewable Energy Systems and  
Energy Efficiency Improvements Grant  
Program; Notice**

**DEPARTMENT OF AGRICULTURE****Rural Development; Notice of Funds Availability (NOFA) Inviting Applications for the Renewable Energy Systems and Energy Efficiency Improvements Grant Program****AGENCY:** Rural Development, USDA.**ACTION:** Notice.

**SUMMARY:** Rural Development announces the availability of up to \$22.8 million in competitive grant funds for fiscal year (FY) 2005 to purchase renewable energy systems and make energy improvements for agricultural producers and rural small businesses. Of the \$22.8 million, \$11.4 million will be set aside through August 31, 2005, for guaranteed loans. These funds will be administered under a final rule to be published in the **Federal Register** later this fiscal year. Any guaranteed loan funds not obligated by August 31, 2005, will be made available for competitive grants under this notice.

In order to be eligible for grant funds, the agricultural producer or rural small business must demonstrate financial need. The grant request must not exceed 25 percent of the eligible project costs.

**DATES:** Applications must be completed and submitted to the appropriate United States Department of Agriculture (USDA) State Rural Development Office postmarked no later than 90 days after the date of the published notice. Applications postmarked after that date will be returned to the applicant with no action.

**ADDRESSES:** Submit proposals to the USDA State Rural Development Office where your project is located or, in the case of a rural small business, where you are headquartered. A list of the Energy Coordinators and State Rural Development Office addresses and telephone numbers follow. For further information about this solicitation, please contact the applicable State Office. This document is available on our Web site at <http://www.rurdev.usda.gov/rbs/farmbill/index.html>.

**USDA State Rural Development Offices***Alabama*

Mary Ann Clayton, USDA Rural Development  
Sterling Center, Suite 601  
4121 Carmichael Road  
Montgomery, AL 36106-3683  
(334) 279-3615

*Alaska*

Dean Stewart, USDA Rural Development  
800 West Evergreen, Suite 201  
Palmer, AK 99645-6539  
(907) 761-7722

*Arizona*

Alan Watt, USDA Rural Development  
230 N. First Avenue, Suite 206  
Phoenix, AZ 85003-1706  
(602) 280-8769

*Arkansas*

Shirley Tucker, USDA Rural Development  
700 West Capitol Avenue, Room 3416  
Little Rock, AR 72201-3225  
(501) 301-3280

*California*

Joseph Choperena, USDA Rural Development  
430 G Street, #4169  
Davis, CA 95616-4169  
(530) 792-5826

*Colorado*

Linda Sundine, USDA Rural Development  
655 Parfet Street, Room E-100  
Lakewood, CO 80215  
(720) 544-2929

*Delaware-Maryland*

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4607 South Dupont Hwy.  
P.O. Box 400  
Camden, DE 19934-0400  
(302) 697-4324

*Florida/Virgin Islands*

Joe Mueller, USDA Rural Development  
4440 NW. 25th Place  
P.O. Box 147010  
Gainesville, FL 32614-7010  
(352) 338-3482

*Georgia*

J. Craig Scroggs, USDA Rural Development  
333 Phillips Drive  
McDonough, GA 30253  
(678) 583-0866

*Hawaii*

Tim O'Connell, USDA Rural Development  
Federal Building, Room 311  
154 Waiuanuenue Avenue  
Hilo, HI 96720  
(808) 933-8313

*Idaho*

Brian Buch, USDA Rural Development  
725 Jensen Grove Drive, Suite 1  
Blackfoot, ID 83221  
(208) 785-5840, Ext. 118

*Illinois*

Patrick Lydic, USDA Rural Development  
2118 West Park Court, Suite A  
Champaign, IL 61821  
(217) 403-6211

*Indiana*

Jerry Hay, USDA Rural Development  
2411 N. 1250 W.  
Deputy, IN 47230  
(812) 873-1100

*Iowa*

Teresa Bomhoff, USDA Rural Development  
873 Federal Building  
210 Walnut Street  
Des Moines, IA 50309  
(515) 284-4447

*Kansas*

F. Martin Fee, USDA Rural Development

1303 SW First American Place, Suite 100  
Topeka, KS 66604-4040  
(785) 271-2744

*Kentucky*

Dewayne Easter, USDA Rural Development  
771 Corporate Drive, Suite 200  
Lexington, KY 40503  
(859) 224-7435

*Louisiana*

Kevin Boone, USDA Rural Development  
3727 Government Street  
Alexandria, LA 71302  
(318) 473-7960

*Maine*

Valarie Flanders, USDA Rural Development  
967 Illinois Avenue, Suite 4  
P.O. Box 405  
Bangor, ME 04402-0405  
(207) 990-9168

*Massachusetts/Rhode Island/Connecticut*

Sharon Colburn, USDA Rural Development  
451 West Street, Suite 2  
Amherst, MA 01002-2999  
(413) 253-4303

*Michigan*

Rick Vanderbeek, USDA Rural Development  
3001 Coolidge Road, Suite 200  
East Lansing, MI 48823  
(517) 324-5218

*Minnesota*

Lisa Noty, USDA Rural Development  
1408 21st Avenue, Suite 3  
Austin, MN 55912  
(507) 437-8247 ext. 150

*Mississippi*

G. Gary Jones, USDA Rural Development  
Federal Building, Suite 831  
100 West Capitol Street  
Jackson, MS 39269  
(601) 965-5457

*Missouri*

D Clark Thomas, USDA Rural Development  
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Parkade Center, Suite 235  
Columbia, MO 65203  
(573) 876-0995

*Montana*

John Guthmiller, USDA Rural Development  
900 Technology Blvd., Unit 1, Suite B  
P.O. Box 850  
Bozeman, MT 59771  
(406) 585-2540

*Nebraska*

Cliff Kumm, USDA Rural Development  
201 North, 25 Street  
Beatrice, NE 68310  
(402) 223-3125

*Nevada*

Dan Johnson, USDA Rural Development  
555 West Silver Street, Suite 101  
Elko, NV 89801  
(775) 738-8468, Ext. 112

*New Hampshire*

See Vermont

*New Jersey*

Michael Kelsey, USDA Rural Development  
5th Floor North, Suite 500  
8000 Midlantic Drive  
Mt. Laurel, NJ 08054  
(856) 787-7700, Ext. 7751

*New Mexico*

Eric Vigil, USDA Rural Development  
6200 Jefferson Street, NE.  
Room 255  
Albuquerque, NM 87109  
(505) 761-4952

*New York*

Scott Collins, USDA Rural Development  
The Galleries of Syracuse, Suite 357  
441 South Salina Street  
Syracuse, NY 13202-2541  
(315) 477-6409

*North Carolina*

H. Rossie Bullock, USDA Rural Development  
P. O. Box 7426  
Lumberton, NC 28359-7426  
(910) 739-3349

*North Dakota*

Dale Van Eckhout, USDA Rural Development  
Federal Building, Room 208  
220 East Rosser Avenue  
P.O. Box 1737  
Bismarck, ND 58502-1737  
(701) 530-2065

*Ohio*

Randy Monhemius, USDA Rural  
Development  
Federal Building, Room 507  
200 North High Street  
Columbus, OH 43215-2418  
(614) 255-2424

*Oklahoma*

Jody Harris, USDA Rural Development  
100 USDA, Suite 108  
Stillwater, OK 74074-2654  
(405) 742-1036

*Oregon*

Don Hollis, USDA Rural Development  
1229 SE Third Street, Suite A  
Pendleton, OR 97801-4198  
(541) 278-8049, Ext. 129

*Pennsylvania*

J. Gregory Greco, USDA Rural Development  
One Credit Union Place, Suite 330  
Harrisburg, PA 17110-2996  
(717) 237-2289

*Puerto Rico*

Luis Garcia, USDA Rural Development  
IBM Building  
654 Munoz Rivera Avenue, Suite 601  
Hato Rey, PR 00918-6106  
(787) 766-5091, ext. 251

*South Carolina*

R. Gregg White, USDA Rural Development  
Strom Thurmond Federal Building  
1835 Assembly Street, Room 1007  
Columbia, SC 29201  
(803) 765-5881

*South Dakota*

Gary Korzan, USDA Rural Development

Federal Building, Room 210  
200 4th Street, SW.  
Huron, SD 57350  
(605) 352-1142

*Tennessee*

Will Dodson, USDA Rural Development  
3322 West End Avenue, Suite 300  
Nashville, TN 37203-1084  
(615) 783-1350

*Texas*

Pat Liles, USDA Rural Development  
Federal Building, Suite 102  
101 South Main Street  
Temple, TX 76501  
(254) 742-9780

*Utah*

Richard Carrig, USDA Rural Development  
Wallace F. Bennett Federal Building  
125 South State Street, Room 4311  
Salt Lake City, UT 84138  
(801) 524-4328

*Vermont/New Hampshire*

Lyn Millhiser, USDA Rural Development  
City Center, 3rd Floor  
89 Main Street  
Montpelier, VT 05602  
(802) 828-6069

*Virginia*

Laurette Tucker, USDA Rural Development  
Culpeper Building, Suite 238  
1606 Santa Rosa Road  
Richmond, VA 23229  
(804) 287-1594

*Washington*

Chris Cassidy, USDA Rural Development  
1835 Black Lake Blvd. SW  
Suite B  
Olympia, WA 98512  
(360) 704-7707

*West Virginia*

Cheryl Wolfe, USDA Rural Development  
75 High Street, Room 320  
Morgantown, WV 26505-7500  
(304) 284-4882

*Wisconsin*

Mark Brodziski, USDA Rural Development  
4949 Kirschling Court  
Stevens Point, WI 54481  
(715) 345-7615, Ext. 131

*Wyoming*

Milton Geiger, USDA Rural Development  
1949 Sugarland Dr. Suite 118  
Sheridan, WY 82801-5749  
(307) 672-5820 ext. 4

**SUPPLEMENTARY INFORMATION:****Programs Affected**

This program is listed in the Catalog of Federal Domestic Assistance under Number 10.755. This program is subject to the provisions of the Executive Order 12372, which requires intergovernmental consultation with State and local officials.

**Paperwork Reduction Act**

The paperwork burden has been cleared by the Office of Management and Budget (OMB) under OMB Control Number 0570-0044.

**Background**

This solicitation is issued pursuant to enactment of the Farm Security and Rural Investment Act of 2002 (2002 Act), which established the Renewable Energy Systems and Energy Efficiency Improvements Program under Title IX, Section 9006. The 2002 Act requires the Secretary of Agriculture to create a program to make direct loans, loan guarantees, and grants to agricultural producers and rural small businesses to purchase renewable energy systems and make energy efficiency improvements. The program is designed to help agricultural producers and rural small businesses reduce energy costs and consumption and help meet the nation's critical energy needs. The 2002 Act also mandates the maximum percentage Rural Development will provide in funding for these types of projects. The Rural Development grant will not exceed 25 percent of the eligible project cost and will be made only to those who demonstrate financial need. Due to the time constraints for implementing this program, Rural Development is issuing only the grant program for FY 2005 at this time.

*Definitions Applicable to This NOFA*

*Agency.* Rural Development or successor Agency assigned by the Secretary of Agriculture to administer the program.

*Agricultural producer.* An individual or entity directly engaged in the production of agricultural products, including crops (including farming); livestock (including ranching); forestry products; hydroponics; nursery stock; or aquaculture, whereby 50 percent or greater of their gross income is derived from the operations.

*Annual receipts.* The total income or gross income (sole proprietorship) plus cost of goods sold.

*Biogas.* Biomass converted to gaseous fuels.

*Biomass.* Any organic material that is available on a renewable or recurring basis including agricultural crops; trees grown for energy production; wood waste and wood residues; plants, including aquatic plants and grasses; fibers; animal waste and other waste materials; and fats, oils, and greases, including recycled fats, oils, and greases. It does not include paper that is commonly recycled or unsegregated solid waste.

*Capacity.* The load that a power generation unit or other electrical apparatus or heating unit is rated by the manufacturer to be able to meet or supply.

*Commercially available.* Systems that have a proven operating history and an established design, installation, equipment, and service industry.

*Demonstrated financial need.* The demonstration by an applicant that the applicant is unable to finance the project from its own resources or other funding sources without grant assistance.

*Eligible project cost.* The total project cost that is eligible to be paid with grant funds.

*Energy audit.* A written report by an independent, qualified entity or individual that documents current energy usage, recommended improvements and costs, energy savings from these improvements, dollars saved per year, and the weighted-average payback period in years.

*Energy efficiency improvement.* Improvements to a facility or process that reduce energy consumption.

*Financial feasibility.* The ability of the business to achieve the projected income and cashflow. The concept includes assessments of the cost-accounting system, the availability of short-term credit for seasonal business, and the adequacy of raw materials and supplies, where necessary.

*Grant close-out.* When all required work is completed, administrative actions relating to the completion of work and expenditures of funds have been accomplished, and the Agency accepts final expenditure information.

*In-kind contributions.* Applicant or third-party real or personal property or services benefiting the federally assisted project or program that are contributed by the applicant or a third party. The identifiable value of goods and services must directly benefit the project.

*Interconnection agreement.* The terms and conditions governing the interconnection and parallel operation of the grantee's or borrower's electric generation equipment and the utility's electric power system. Other services required by the applicant from the utility are covered under separate arrangements.

*Matching funds.* The funds needed to pay for the portion of the eligible project costs not funded by the Agency through a grant under this program.

*Other waste materials.* Inorganic or organic materials that are used as inputs for energy production or are by-products of the energy production process.

*Power purchase arrangement.* The terms and conditions governing the sale

and transportation of electricity produced by the grantee or borrower to another party. Other services required by the applicant from the utility are covered under separate arrangements.

*Pre-commercial technology.* Technology that has emerged through the research and development process and has technical and economic potential for application in commercial energy markets but is not yet commercially available.

*Renewable energy.* Energy derived from a wind, solar, biomass, or geothermal source; or hydrogen derived from biomass or water using wind, solar, biomass or geothermal energy sources.

*Renewable energy system.* A process that produces energy from a renewable energy source.

*Rural.* Any area other than a city or town that has a population of greater than 50,000 inhabitants and the urbanized area contiguous and adjacent to such a city or town.

*Small business.* An entity is considered a small business in accordance with the Small Business Administration (SBA) small business size standards by North American Industry Classification System (NAICS) found in title 13 CFR part 121. A private entity including a sole proprietorship, partnership, corporation, cooperative (including a cooperative qualified under section 501(c)(12) of the Internal Revenue Code) and an electric utility including a Tribal or Governmental Electric Utility that provides service to rural consumers on a cost-of-service basis without support from public funds or subsidy from the Government authority establishing the district. These entities must operate independent of direct Government control. Public or private nonprofit is excluded, except as provided above. A very small business is a business with fewer than 15 employees and less than \$1 million in annual receipts.

*State.* Any of the 50 States, the Commonwealth of Puerto Rico, the Virgin Islands of the United States, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Republic of Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands.

*Total project cost.* The sum of all costs associated with a completed, operational project.

#### *Grant Amounts*

The amount of funds available for this program in FY 2005 is approximately \$22.8 million. Of the \$22.8 million, \$11.4 million will be set aside through August 31, 2005, for a guaranteed loan

program. These funds will be administered under a final rule implementing the Section 9006 program, which is expected to be promulgated in FY 2005. Any guaranteed loan funds not obligated by August 31, 2005, will be made available for competitive grants under this notice.

Rural Development grant funds may be used to pay up to 25 percent of the eligible project cost. Applications for renewable energy systems must be for a minimum grant request of \$2,500 but no more than \$500,000. Applications for energy efficiency improvements must be for a minimum grant request of \$2,500 but no more than \$250,000. The actual number of grants funded will depend on the quality of proposals received and the amount of funding requested. These limits are consistent with energy efficiency improvement projects and alternative energy systems, which the Department has determined are appropriate for agricultural producers and rural small businesses. Grant limitations were based on historical data supplied from Department of Energy, Environmental Protection Agency, and Rural Utilities Service on renewable energy systems and from an energy efficiency state program for energy efficiency improvements.

#### *Applicant Eligibility*

To receive a grant under this notice, an applicant must meet each of the criteria, as applicable, as set forth in paragraphs (a) through (f).

(a) The applicant or borrower must be an agricultural producer or rural small business.

(b) Individuals must be citizens of the United States (U.S.) or reside in the U.S. after being legally admitted for permanent residence.

(c) Entities must be at least 51 percent owned, directly or indirectly, by individuals who are either citizens of the U.S. or reside in the U.S. after being legally admitted for permanent residence.

(d) If the applicant or borrower, or an owner has an outstanding judgment obtained by the U.S. in a Federal Court (other than in the United States Tax Court), is delinquent in the payment of Federal income taxes, or is delinquent on a Federal debt, the applicant or borrower is not eligible to receive a grant until the judgment is paid in full or otherwise satisfied, or the delinquency is resolved.

(e) In the case of an applicant or borrower that is applying as a rural small business, the business headquarters must be in a rural area and the project to be funded also must be in a rural area.

(f) The applicant must have demonstrated financial need.

Adverse actions made on applications are appealable pursuant to 7 CFR part 11.

#### *Project Eligibility*

For a project to be eligible to receive a grant under this notice, the proposed project must meet each of the criteria, as applicable, in paragraphs (a) through (f).

(a) The project must be for the purchase of a renewable energy system or to make energy efficiency improvements.

(b) The project must be for a pre-commercial or commercially available and replicable technology, not for research and development.

(c) The project must be technically feasible.

(d) The project must be located in a rural area.

(e) The applicant must be the owner of the system and control the operation and maintenance of the proposed project. A qualified third-party operator may be used to manage the operation and/or for maintenance of the proposed project.

(f) All projects must be based on satisfactory sources of revenues in an amount sufficient to provide for the operation and maintenance of the system or project.

(g) The total input from a nonrenewable energy source for necessary and incidental requirements of the energy system will be determined by the technical reviewers.

#### *Grant Funding*

(a) The amount of grant funds that will be made available to an eligible project under this notice will not exceed 25 percent of eligible project costs.

(1) The only eligible project costs are those costs associated with the items identified in paragraphs (a)(1)(i) through (ix). The items must be an integral and necessary part of the total project:

(i) Post-application purchase and installation of equipment, except agricultural tillage equipment and vehicles;

(ii) Post-application construction or project improvements, except residential;

(iii) Energy audits or assessments;

(iv) Permit fees;

(v) Professional service fees, except for application preparation;

(vi) Feasibility studies;

(vii) Business plans;

(viii) Retrofitting; and

(ix) Construction of a new facility only when the facility is used for the same purpose, is approximately the same size, and based on the energy

audit will provide more energy savings than improving an existing facility. Only costs identified in the energy audit for energy efficiency projects are allowed.

(2) The applicant must provide at least 75 percent of eligible project costs to complete the project. Applicant in-kind and other Federal grant awards cannot be used to meet the 75 percent match requirements. However, the Agency will allow third-party, in-kind contributions to be used in meeting the matching requirement. Third-party, in-kind contributions will be limited to 10 percent of the 75 percent match requirement of the grantee. The Agency will advise if the third-party, in-kind contributions are acceptable in accordance with 7 CFR part 3015.

(b) The maximum amount of grant assistance to one individual or entity for applications for Renewable Energy Systems and Energy Efficiency Improvements will not exceed \$750,000.

(c) Applications for renewable energy systems must be for a minimum grant request of \$2,500 but no more than \$500,000.

(d) Applications for energy efficiency improvements must be for a minimum grant request of \$2,500 but no more than \$250,000.

#### *Application and Documentation*

(a) *Application.* Separate applications must be submitted for Renewable Energy System and Energy Efficiency Improvement projects. For each type of project, two complete copies of the application must be submitted.

(1) *Table of Contents.* The first item in each application will be a detailed Table of Contents in the order presented below. Include page numbers for each component of the proposal. Begin pagination immediately following the Table of Contents.

(2) *Project Summary.* A summary of the project proposal, not to exceed one page, must include the following: Title of the project, a detailed description of the project including its purpose and need, goals and tasks to be accomplished, names of the individuals responsible for conducting and completing the tasks, and the expected timeframes for completing all tasks, including an operational date. The applicant must also clearly state whether the application is for the purchase of a renewable energy system or to make energy efficiency improvements.

(3) *Eligibility.* Each applicant must describe how it meets the eligibility requirements.

(4) *Agricultural producer/small business information.* All applications

must contain the following information on the agricultural producer or small business seeking funds under this program:

(i) *Business/farm/ranch operation.* (A) A description of the ownership, including a list of individuals and/or entities with ownership interest, names of any corporate parents, affiliates, and subsidiaries, as well as a description of the relationship, including products, between these entities.

(B) A description of the operation.

(ii) *Management.* The resume of key managers focusing on relevant business experience. If a third-party operator is used to monitor and manage the project, provide a discussion on the benefits and burdens of such monitoring and management, as well as the qualifications of the third party.

(iii) *Financial information.* (A) Explanation of demonstrated financial need.

(B) For rural small businesses, a current balance sheet and income statement prepared in accordance with generally accepted accounting principles (GAAP) and dated within 90 days of the application. Agricultural producers must present financial information in the format that is generally required by commercial agriculture lenders. Financial information is required on the total operations of the agricultural producer/small business and its parent, subsidiary, or affiliates at other locations.

(C) Rural small businesses must provide sufficient information to determine total annual receipts of the business and any parent, subsidiary, or affiliates at other locations. Voluntarily providing tax returns is one means of satisfying this requirement. Information provided must be sufficient for the Agency to make a determination of total income and cost of goods sold by the business.

(D) If available, historical financial statements prepared in accordance with GAAP for the past 3 years, including income statements and balance sheets. If agricultural producers are unable to present this information in accordance with GAAP, they may instead present financial information for the past 3 years in the format that is generally required by commercial agriculture lenders.

(E) Pro forma balance sheet at startup of the agricultural producer's/small business' business that reflects the use of the loan proceeds or grant award; and 3 additional years, indicating the necessary startup capital, operating capital, and short-term credit; and projected cashflow and income

statements for 3 years supported by a list of assumptions showing the basis for the projections.

(F) For agricultural producers, identify the gross market value of your agricultural products for the calendar year preceding the year in which you submit your application.

(iv) Production information for renewable energy system projects. (A) Provide a statement as to whether the technology to be employed by the facility is commercially or pre-commercially available and replicable. Provide information to support this position.

(B) Describe the availability of materials, labor, and equipment for the facility.

(v) Business market information for renewable energy system projects.

(A) Demand. Identify the demand (past, present, and future) for the product and/or service and who will buy the product and/or service.

(B) Supply. Identify the supply (past, present, and future) of the product and/or service and your competitors.

(C) Market niche. Given the trends in demand and supply, describe how the business will be able to sell enough of its product/service to be profitable.

(vi) A Dun and Bradstreet Universal Numbering System (DUNS) number.

(b) *Forms, certifications, and agreements.* Each application submitted must contain, as applicable, the items identified in paragraphs (b)(1) through (15) of this section.

(1) Form SF-424, "Application for Federal Assistance."

(2) Form SF-424C, "Budget Information—Construction Programs." Each cost classification category listed on the form must be filled out if it applies to your project. Any cost category item not listed on the form that applies to your project can be put under the miscellaneous category. Attach a separate sheet if you are using the miscellaneous category and list each miscellaneous cost by not allowable and allowable costs in the same format as on Form SF-424C. All project costs must be categorized as either allowable or not allowable.

(3) Form SF-424D, "Assurances—Construction Programs."

(4) AD-1049, "Certification Regarding Drug-Free Workplace Requirements."

(5) AD-1048, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tiered Covered Transactions."

(6) A copy of a bank statement or a copy of the confirmed funding commitment from the funding source. Matching funds must be included on Forms SF-424 and SF-424C.

(7) Exhibit A-1, (Certification for Contracts, Grants and Loans) of RD Instruction 1940-Q required by Section 319 of Public Law 101-121 if the grant exceeds \$100,000 or Exhibit A-2, (Statement of Loan Guarantees) of RD Instruction 1940-Q required by Section 319 of Public Law 101-121 if the guaranteed loan exceeds \$150,000.

(8) If the applicant has made or agreed to make payment using funds other than Federal appropriated funds to influence or attempt to influence a decision in connection with the application, Form SF-LLL, "Disclosure of Lobbying Activities," must be completed.

(9) AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters—Primary Covered Transactions."

(10) Form RD 400-1, "Equal Opportunity Agreement."

(11) Form RD 400-4, "Assurance Agreement."

(12) If the project involves interconnection to an electric utility, a copy of a letter of intent to purchase power, a power purchase agreement, a copy of a letter of intent for an interconnection agreement, or an interconnection agreement will be required from your utility company or other purchaser for renewable energy systems.

(13) If applicable, intergovernmental consultation comments in accordance with Executive Order 12372.

(14) Applicants and borrowers must provide a certification indicating whether or not there is a known relationship or association with an Agency employee.

(15) *Environmental review.* All applicants must complete Form RD 1940-20, "Request for Environmental Information." All applicants will be responsible for providing all information necessary for the Agency to do a National Environmental Policy Act (NEPA) review and analysis in accordance with 7 CFR part 1940, subpart G. Any additional environmental information required will be conveyed to the applicant after a preliminary review of the grant application by the State Rural Development Office. Any applicable analyses and studies required as part of completing the NEPA analysis (*i.e.*, Historical and Cultural Resource, Biological Assessments, etc.) will be the responsibility of the applicant. The applicant should strive to achieve positive community support, select good sites, and mitigate environmental impacts resulting from his/her proposal. If an environmental review cannot be completed in sufficient time for grant

funds to be obligated by September 30, 2005, grant funds will not be awarded.

(c) *Feasibility study for renewable energy systems.* Each application for a renewable energy system project, except for requests of \$50,000 or less, must include a project-specific feasibility study prepared by a qualified independent consultant. The feasibility study must include an analysis of the market, financial, economic, technical, and management feasibility of the proposed project. The feasibility study must also include an opinion and a recommendation by the independent consultant.

(d) *Technical requirements reports.* The technical report must demonstrate that the project design, procurement, installation, startup, operation and maintenance of the Renewable Energy System or Energy Efficiency Improvement will operate or perform as specified over its design life in a reliable and a cost effective manner. The technical report must also identify all necessary project agreements, demonstrate that those agreements will be in place, and that necessary project equipment and services are available over the design life.

All technical information provided must follow the format specified in paragraphs (d)(1) through (10). The technical reports will provide the basis for the technical merit score and project eligibility determination as required by this notice. Supporting information may be submitted in other formats. Preliminary design drawings and process flow charts should be included as exhibits. A discussion of each topic identified in paragraphs (d)(1) through (10) is not necessary if the topic is not applicable to the specific project. Questions identified in the Agency's technical review of the project must be answered to the Agency's satisfaction before the application will be approved. The applicant must submit the original technical requirements report, plus one copy to the State Rural Development Office. Projects requesting more than \$50,000 require the services of a professional engineer (PE). Depending on the level of engineering required for the specific project or if necessary to ensure public safety, the services of a PE may be required for smaller projects.

Below are the requirements for the technical reports for specific technologies. It is only necessary to read the one that fits your proposed project.

The 10 technology areas are:

- Biomass, bio-energy;
- Biomass, anaerobic digesters;
- Geothermal, electric generation;
- Geothermal, direct use;
- Hydrogen;

- Solar, small;
- Solar, large;
- Wind, small;
- Wind, large; and
- Energy efficiency improvements.

(1) *Biomass, bioenergy.* The technical requirements specified in paragraphs (d)(1)(i) through (x) apply to renewable energy projects that produce fuel, thermal energy, or electric power from a biomass source, including wood, agricultural residue excluding animal wastes, or other energy crops considered biomass or bioenergy projects. The major components of bioenergy systems will vary significantly depending on the type of feedstock, product, type of process, and size of the process, but in general includes components around which the balance of the system is designed.

(i) *Qualifications of project team.* The biomass project team will vary according to the complexity and scale of the project. For engineered systems, the project team should consist of a system designer, a project manager, an equipment supplier, a project engineer, a construction contractor or system installer, and a system operator and maintainer. One individual or entity may serve more than one role.

The project team must have demonstrated expertise in similar biomass systems development, engineering, installation, and maintenance. The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The application must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the biomass system equipment manufacturers of major components being considered in terms of the length of time in business and the number of units installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, system designer, project engineer, and construction

contractor qualifications for engineering, designing, and installing biomass energy systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available; and

(D) Describe the system operator's qualifications and experience for servicing, operating, and maintaining biomass renewable energy equipment or projects. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(1)(ii)(A) through (G).

(A) Biomass systems must be installed in accordance with applicable local, State, and national codes and regulations. Identify zoning and code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify licenses where required and the schedule for obtaining those licenses.

(C) Identify land use agreements required for the project and the schedule for securing the agreements and the term of those agreements.

(D) Identify any permits or agreements required for solid, liquid, and gaseous emissions or effluents and the schedule for securing those permits and agreements.

(E) Identify available component warranties for the specific project location and size.

(F) Systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, describe the applicable local net metering program.

(G) Describe all potential environmental impacts resulting from siting issues, construction, and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required

permits (*i.e.* wetland fill, endangered species, air quality, NPDES, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Indicate the type, quantity, quality, and seasonality of the biomass resource including harvest and storage, where applicable. Where applicable, also indicate shipping or receiving method and required infrastructure for shipping. For proposed projects with an established resource, provide a summary of the resource.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive including site selection, system and component selection, and system monitoring equipment. Systems must be constructed by a qualified entity.

(A) The application must include a concise but complete description of the biomass project including location of the project, resource characteristics, system specifications, electric power system interconnection, and monitoring equipment. Identify possible vendors and models of major system components. Describe the expected electric power, fuel production, or thermal energy production of the proposed system as rated and as expected in actual field conditions. For systems with a capacity more than 20 tons per day of biomass, address performance on a monthly and annual basis. For small projects such as a commercial biomass furnace or pelletizer of up to 5 tons daily capacity, proven, commercially available devices need not be addressed in detail. Describe the uses of or the market for electricity, heat, or fuel produced by the system. Discuss the impact of reduced or interrupted biomass availability on the system process.

(B) The application must include a description of the siting criteria used in selecting the project site and the reason for elimination of other site alternatives considered and address issues such as site access, foundations, backup equipment when applicable, and environmental issues with emphasis on land use, air quality, water quality,

noise pollution, soil degradation, wildlife, habitat fragmentation, aesthetics, odor, and other construction and installation issues applicable to this type of technology. Identify any unique construction and installation issues.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including resource assessment, system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including project management, resource assessment, project design, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed analysis and description of annual project revenues and expenses. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Biomass systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and shakedown specification and process

and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Provide information regarding available system and component warranties and availability of spare parts;

(B) Have a biomass input capacity exceeding 10 tons of biomass per day for systems.

(1) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedule for the mechanical, piping, and electrical systems and system monitoring and control requirements. Provide information that supports expected design life of the system and timing of major component replacement or rebuilds; and

(2) Discuss the costs and labor associated with operations and maintenance of system and plans for in or outsourcing. Describe opportunities for technology transfer for long term project operations and maintenance by a local entity or owner/operator; and

(C) Provide and discuss the risk management plan for handling large, unanticipated failures or major components. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, environmental compliance requirements, and costs for removal and disposal of the system.

(2) *Biomass, Anaerobic digester.* The technical requirements specified in paragraphs (d)(2)(i) through (x) apply to renewable energy projects, called anaerobic digester projects, that use animal waste and other organic substrates to produce thermal or electrical energy via anaerobic digestion. The major components of an anaerobic digester system include the digester, the gas handling and transmission systems, and the gas use system.

(i) *Qualifications of project team.* The anaerobic digester project team should consist of a system designer, a project manager, an equipment supplier, a project engineer, a construction contractor, and a system operator or maintainer. One individual or entity may serve more than one role.

The project team must have demonstrated commercial-scale expertise in anaerobic digester systems development, engineering, installation, and maintenance as related to the organic materials and operating mode of the system. The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the anaerobic digester system equipment manufacturers of major components being considered in terms of the length of time in business and the number of units installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, system designer, project engineer, and construction contractor qualifications for engineering, designing, and installing anaerobic digester systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently operating consistent with the substrate material and with references if available; and

(D) For regional or centralized digester plants, describe the system operator's qualifications and experience for servicing, operating, and maintaining similar projects. Farm scale systems may not require operator experience as the developer is typically required to provide operational training during system startup and shakedown. Provide a list of the same or similar projects designed, installed, or supplied and currently operating consistent with the substrate material and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits,



including the items specified in paragraphs (d)(2)(ii)(A) through (G).

(A) Anaerobic digester systems must be installed in accordance with applicable local, State, and national codes and regulations. Anaerobic digesters must also be designed and constructed in accordance with USDA anaerobic digester standards. Identify zoning and code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify licenses where required and the schedule for obtaining those licenses.

(C) For regional or centralized digester plants, identify feedstock access agreements required for the project and the schedule for securing those agreements and the term of those agreements.

(D) Identify any permits or agreements required for transport and ultimate waste disposal and the schedule for securing those agreements and permits.

(E) Identify available component warranties for the specific project location and size.

(F) Systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, describe the applicable local net metering program.

(G) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.*, wetland fill, endangered species, air quality, NPDES, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Indicate the substrates used as digester inputs including animal wastes, food processing wastes, or other organic wastes in terms of type, quantity, seasonality, and frequency of collection. Describe any special handling of feedstock that may be necessary. Describe the process for determining the feedstock resource. Provide either tabular values or laboratory analysis of representative samples that include

biodegradability studies to produce gas production estimates for the project on daily, monthly, and seasonal bases.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, will ensure public safety, mitigate any adverse environmental impacts, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive including site selection, digester component selection, gas handling component selection, and gas use component selection. Systems must be constructed by a qualified entity.

(A) The application must include a concise but complete description of the anaerobic digester project including location of the project, farm description, feedstock characteristics, a step-by-step flowchart of unit operations, electric power system interconnection equipment, and any required monitoring equipment. Identify possible vendors and models of major system components. Provide the expected system energy production, heat balances, material balances as part of the unit operations flowchart.

(B) The application must include a description of the siting criteria used in selecting the project site and the reason for elimination of other site alternatives considered and address issues such as site access, foundations, backup equipment when applicable, and environmental issues with emphasis on land use, air quality, water quality, noise pollution, soil degradation, wildlife, habitat fragmentation, aesthetics, odor, and other construction and installation issues applicable to this type of technology. Identify any unique construction and installation issues.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including feedstock assessment, system and site design, permits and agreements, equipment procurement, system installation from

excavation through startup and shakedown, and operator training.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including project management, feedstock assessment, project design, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, training and operations, and maintenance costs of both the digester and the gas use systems. Provide a detailed analysis and description of annual project revenues and expenses. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Anaerobic digester systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 3-year warranty for equipment and a 10-year warranty on design. Provide information regarding system warranties and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed project, including maintenance for the digester, the gas

handling equipment, and the gas use systems. Describe any maintenance requirements for system monitoring and control equipment;

(C) Provide information that supports expected design life of the system and the timing of major component replacement or rebuilds;

(D) Provide and discuss the risk management plan for handling large, unanticipated failures of major components. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing; and

(E) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator.

(x) *Decommissioning*. When uninstalling or removing the project, describe the decommissioning process. Describe any issues, environmental compliance requirements, and costs for removal and disposal of the system.

(3) *Geothermal, electric generation*. The technical requirements specified in paragraphs (d)(3)(i) through (x) apply to geothermal projects that produce electric power from the thermal potential of a geothermal source. The major components of an electric generating geothermal system include the production well, the separator or heat exchanger, the turbine, the generator, condenser, and the balance of station elements including the field piping, roads, fencing and grading, plant buildings, transformers and other electrical infrastructure such as interconnection equipment.

(i) *Qualifications of project team*. The electric generating geothermal plant project team should consist of a system designer, a project manager, an equipment supplier, a project engineer, a construction contractor, and a system operator and maintainer. One individual or entity may serve more than one role.

The project team must have demonstrated expertise in geothermal electric generation systems development, engineering, installation, and maintenance. The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project

and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the geothermal plant equipment manufacturers of major components being considered in terms of the length of time in business and the number of units installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, system designer, project engineer, and construction contractor qualifications for engineering, designing, and installing geothermal electric generation systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available; and

(D) Describe system operator's qualifications and experience for servicing, operating, and maintaining electric generating geothermal projects. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits*. The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(3)(ii)(A) through (F).

(A) Electric generating geothermal systems must be installed in accordance with applicable local, State, and national codes and regulations. Identify zoning and code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify any permits or agreements required for well construction and for disposal or re-injection of cooled geothermal waters and the schedule for securing those agreements and permits.

(C) Identify land use or access to the resource agreements required for the project and the schedule for securing the agreements and the term of those agreements.

(D) Identify available component warranties for the specific project location and size.

(E) Systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses

where required and the schedule for meeting those requirements and obtaining those agreements.

(F) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.*, wetland fill, endangered species, Air Quality, State Water Quality Certification, etc.)

(iii) *Resource assessment*. The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Indicate the quality of the geothermal resource including temperature, flow, and sustainability and what conversion system is to be installed. Describe any special handling of cooled geothermal waters that may be necessary. Describe the process for determining the geothermal resource including measurement setup for the collection of the geothermal resource data. For proposed projects with an established resource, provide a summary of the resource and the specifications of the measurement setup.

(iv) *Design and engineering*. The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, will ensure public safety, mitigate any adverse environmental impacts, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive including site selection, system and component selection, conversion system component and selection, design of the local collection grid, interconnection equipment selection, and system monitoring equipment. Systems must be constructed by a qualified entity.

(A) The application must include a concise but complete description of the geothermal project including location of the project, resource characteristics, thermal system specifications, electric power system interconnection equipment and project monitoring equipment. Identify possible vendors and models of major system components. Provide the expected system energy production on a monthly and annual basis.

(B) The application must include a description of the siting criteria used in

selecting the project site and the reason for elimination of other site alternatives considered and address issues such as site access, foundations, backup equipment when applicable, proximity to the electrical grid, environmental issues with emphasis on land use, air quality, water quality, noise pollution, soil degradation, wildlife, habitat fragmentation, aesthetics, odor, and other construction, and installation issues applicable to this type of technology. Identify any unique construction and installation issues.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including resource assessment, system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including project management, resource assessment, project design, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed analysis and description of annual project revenues including electricity sales, production tax credits, revenues from green tags, and any other production incentive programs throughout the life of the project. Provide a detailed description of applicable investment incentives, productivity incentives, loans, and grants.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Geothermal systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping,

receiving, and on-site storage or inventory. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup or shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding turbine warranties and availability of spare parts;

(B) describe the routine operations and maintenance requirements of the proposed project, including maintenance for the mechanical and electrical systems and system monitoring and control requirements;

(C) provide information that supports expected design life of the system and timing of major component replacement or rebuilds;

(D) provide and discuss the risk management plan for handling large, unanticipated failures of major components such as the turbine. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing; and

(E) Describe opportunities for technology transfer for long term project operations and maintenance by a local entity or owner/operator.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, and costs for removal and disposal of the system.

(4) *Geothermal, direct use.* The technical requirements specified in paragraphs (d)(4)(i) through (x) apply to geothermal projects that directly use thermal energy from a geothermal source. The major components of a direct use geothermal system include the production well, the heat exchanger, pumps, and the balance of station elements including the field piping, re-injection wells or other disposal equipment as required, and final point-

of-use heat exchangers and control systems.

(i) *Qualifications of project team.* The geothermal project team should consist of a system designer, a project manager, an equipment supplier, a project engineer, a construction contractor, and a system operator and maintainer. One individual or entity may serve more than one role.

The project team must have demonstrated expertise in geothermal heating systems development, engineering, installation, and maintenance. The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such method include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the geothermal system equipment manufacturers of major components being considered in terms of the length of time in business and the number of units installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, system designer, project engineer, and construction contractor qualifications for engineering, designing, and installing direct use geothermal systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available; and

(D) Describe system operator's qualifications and experience for servicing, operating, and maintaining direct use generating geothermal projects. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits,

including the items specified in paragraphs (d)(4)(ii)(A) through (F).

(A) Direct use geothermal systems must be installed in accordance with applicable local, State, and national codes and regulations. Identify zoning and code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify licenses where required and the schedule for obtaining those licenses.

(C) Identify land use or access to the resource agreements required for the project and the schedule for securing the agreements and the term of those agreements.

(D) Identify any permits or agreements required for well construction and for disposal or re-injection of cooled geothermal waters and the schedule for securing those permits and agreements.

(E) Identify available component warranties for the specific project location and size.

(F) Describe all potential environmental impacts resulting from siting issues, construction, and operation of the proposed project.

Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.* wetland fill, endangered species, Air Quality, State Water Quality Certification, etc.).

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Indicate the quality of the geothermal resource including temperature, flow, and sustainability and what direct use system is to be installed. Describe any special handling of cooled geothermal waters that may be necessary. Describe the process for determining the geothermal resource including measurement setup for the collection of the geothermal resource data. For proposed projects with an established resource, provide a summary of the resource and the specifications of the measurement setup.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, will ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with

matched components. The engineering must be comprehensive including site selection, system and component selection, thermal system component selection, and system monitoring equipment. Systems must be constructed by a qualified entity.

(A) The application must include a concise but complete description of the geothermal project including location of the project, resource characteristics, thermal system specifications, and monitoring equipment. Identify possible vendors and models of major system components. Provide the expected system energy production on a monthly and annual basis.

(B) The application must include a description of the siting criteria used in selecting the project site and the reason for elimination of other site alternatives considered and address issues such as, site access, foundations, thermal backup equipment, and environmental issues with emphasis on land use, air quality, water quality, noise pollution, soil degradation, wildlife, habitat fragmentation, aesthetics, odor, and other construction, and installation issues applicable to this type of technology. Identify any unique construction and installation issues.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including resource assessment, system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including project management, resource assessment, project design, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed analysis and description of annual project revenues and expenses. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Geothermal systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding system warranties and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed project, including maintenance for the mechanical and electrical systems and system monitoring and control requirements;

(C) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;

(D) Provide and discuss the risk management plan for handling large, unanticipated failures of major components. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing; and

(E) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, environmental compliance requirements, and costs for removal and disposal of the system.

(5) *Hydrogen*. The technical requirements specified in paragraphs (d)(5)(i) through (x) apply to renewable energy projects that produce hydrogen and renewable energy projects that use mechanical or electric power or thermal energy from a renewable resource using hydrogen as an energy transport medium. The major components of hydrogen systems include reformers, electrolyzers, hydrogen compression and storage components, and fuel cells.

(i) *Qualifications of project team*. The hydrogen project team will vary according to the complexity and scale of the project. For engineered systems, the project team should consist of a system designer, a project manager, an equipment supplier, a project engineer, a construction contractor or system installer, and a system operator and maintainer. One individual or entity may serve more than one role.

The project team must have demonstrated expertise in similar hydrogen systems development, engineering, installation, and maintenance. The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the hydrogen system equipment manufacturers of major components for the hydrogen system being considered in terms of the length of time in the business and the number of units installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, system designer, project engineer, and construction contractor qualifications for engineering, designing, and installing hydrogen systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently

operating and with references if available; and

(D) Describe the system operator's qualifications and experience for servicing, operating, and maintaining hydrogen system equipment or projects. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits*. The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(5)(ii)(A) through (G).

(A) Hydrogen systems must be installed in accordance with applicable local, State, and national codes and regulations. Identify zoning and building code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify licenses where required and the schedule for obtaining those licenses.

(C) Identify land use agreements required for the project and the schedule for securing the agreements and the term of those agreements.

(D) Identify any permits or agreements required for solid, liquid, and gaseous emissions or effluents and the schedule for securing those permits and agreements.

(E) Identify available component warranties for the specific project location and size.

(F) Systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, provide a description of the applicable local net metering program.

(G) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (Air Quality, etc.)

(iii) *Resource assessment*. The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed.

Indicate the type, quantity, quality, and seasonality of the biomass resource. For solar, wind, or geothermal sources of energy used to generate hydrogen, indicate the local renewable resource where the hydrogen system is to be installed. Local resource maps may be used as an acceptable preliminary source of renewable resource data. For proposed projects with an established renewable resource, provide a summary of the resource.

(iv) *Design and engineering*. The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, will ensure public safety, mitigate any adverse environmental impacts, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive including site selection, system and component selection, and system monitoring equipment. Systems must be constructed by a qualified entity.

(A) The application must include a concise but complete description of the hydrogen project including location of the project, resource characteristics, system specifications, electric power system interconnection equipment, and monitoring equipment. Identify possible vendors and models of major system components. Describe the expected electric power, fuel production, or thermal energy production of the proposed system. Address performance on a monthly and annual basis. Describe the uses of or the market for electricity, heat, or fuel produced by the system. Discuss the impact of reduced or interrupted resource availability on the system process.

(B) The application must include a description of the siting criteria used in selecting the project site and the reason for elimination of other site alternatives considered and address issues such as site access, foundations, backup equipment when applicable, and any environmental issues and safety concerns with emphasis on land use, air quality, water quality, aesthetics, odor, safety hazards, and other construction and installation issues applicable to this type of technology. Identify any unique construction and installation issues.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including resource assessment, system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including project management, resource assessment, project design and engineering, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed analysis and description of annual project revenues and expenses. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Hydrogen systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues, such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping and receiving, and on-site storage or inventory. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Provide information regarding system warranties and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed project, including maintenance of the reformer, electrolyzer, or fuel cell as appropriate, and other mechanical, piping, and electrical systems and system monitoring and control requirements;

(C) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;

(D) Provide and discuss the risk management plan for handling large, unanticipated failures of major components. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing; and

(E) Describe opportunities for technology transfer for long term project operations and maintenance by a local entity or owner/operator.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, and costs for removal and disposal of the system.

(6) *Solar, small.* The technical requirements specified in paragraphs (d)(6)(i) through (x) of this section apply to small solar electric projects and small solar thermal projects. Small solar electric projects are those for which the rated power of the system is 10kW or smaller. The major components of a small solar electric system are the solar panels, the support structure, the foundation, the power conditioning equipment, the interconnection equipment, surface or submersible water pumps, energy storage equipment and supporting documentation including operations and maintenance manuals. Small solar electric projects are either stand-alone (off grid) or interconnected to the grid at less than 600 volts (on grid). Small solar thermal projects are those for which the rated storage volume of the system is 240 gallons or smaller. The major components of a small solar thermal system are the solar collector(s), the support structure, the foundation, the circulation pump(s) and piping, heat exchanger (if required), energy storage equipment and support.

(i) *Qualifications of project team.* The small solar project team should consist of a system designer, a project manager or general contractor, an equipment supplier of major components, a system installer, a system maintainer, and, in some cases, the owner of the application or load served by the system. One

individual or entity may serve more than one role.

The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the qualifications of the suppliers of major components being considered;

(B) Describe the knowledge, skills, and abilities needed to service, operate, and maintain the system for the proposed application; and

(C) Discuss the project manager, system designer, and system installer qualifications for engineering, designing, and installing small solar systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar systems designed or installed by the design and installation team and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(6)(ii)(A) through (D).

(A) Small solar systems must be installed in accordance with local, State, and national building and electrical codes and regulations. Identify zoning, building and electrical code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify available component warranties for the specific project location and size.

(C) Small solar electric systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, describe the applicable local net metering program.

(D) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were

considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.* wetland fill, endangered species, water quality, hazard materials handling, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Describe the local solar resource where the solar system is to be installed. Acceptable sources of solar resource data include state solar maps and nearby weather station data. Incorporate information from state solar resource maps when possible. Indicate the source of the solar data and assumptions made when applying nearby solar data to the site.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards. For small solar electric systems, the engineering must be comprehensive, including solar collector design and selection, support structure design and selection, power conditioning design and selection, surface or submersible water pumps and energy storage requirements as applicable, and selection of cabling, disconnects and interconnection equipment. For small solar thermal systems, the engineering must be comprehensive, including solar collector design and selection, support structure design and selection, pump and piping design and selection, and energy storage design and selection.

(A) The application must include a concise but complete description of the small solar system including location of the project and proposed equipment specifications. Identify possible vendors and models of major system components. Provide the expected system energy production based on available solar resource data on a monthly (when possible) and annual basis and how the energy produced by the system will be used.

(B) The application must include a description of the siting criteria used in selecting the project site and the reason for elimination of other site alternatives considered and address issues such as solar access, site access, foundations, backup equipment when applicable, orientation, proximity to the load or the electrical grid, unique safety concerns, and environmental issues with emphasis on land use, water quality,

wildlife, habitat fragmentation, aesthetics, and other construction, and installation issues, and whether special circumstances exist applicable to this type of technology.

(C) Sites and application load must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including design, permitting, equipment, site preparation, system installation, system startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives. Provide a detailed description of historic or expected energy use and expected energy offsets or sales on a monthly and annual basis.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Small solar systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Provide a detailed description of equipment certification. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment needed for project construction, and provide a description of the startup and

shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 5-year warranty for equipment. Provide information regarding system warranty and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedules for the mechanical and electrical and software systems;

(C) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance; and

(D) Provide information regarding expected system design life and timing of major component replacement or rebuilds. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, such as proper disposal or recycling procedures to reduce potential impact from hazardous chemicals and costs for removal and disposal of the system.

(7) *Solar, large.* The technical requirements specified in paragraphs (d)(7)(i) through (x) apply to large solar electric projects and large solar thermal projects. Large solar electric systems are those for which the rated power of the system is larger than 10kW. The major components of a large solar electric system are the solar panels, the support structure, the foundation, the power conditioning equipment, the interconnection equipment, surface or submersible water pumps and energy storage equipment and supporting documentation including operations and maintenance manuals. Large solar electric systems are either stand-alone (off grid) or interconnected to the grid (on grid.) Large solar thermal systems are those for which the rated storage volume of the system is greater than 240 gallons. The major components of a large solar thermal system are the solar collector(s), the support structure, the foundation, the circulation pump(s) and piping, heat exchanger (if required), energy storage equipment and



supporting documentation including operations and maintenance manuals.

(i) *Qualifications of project team.* The large solar project team should consist of an equipment supplier of major components, a project manager, general contractor, a system engineer, a system installer, and system maintainer. One individual or entity may serve more than one role.

The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developer's risk;

(B) Discuss the qualifications of the suppliers of major components being considered;

(C) Discuss the project manager, general contractor, system engineer, and system installer qualifications for engineering, designing, and installing large solar systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar systems designed or installed by the design, engineering, and installation team and currently operating and with references if available; and

(D) Describe the system operator's qualifications and experience for servicing, operating, and maintaining the system for the proposed application. Provide a list of the same or similar systems designed or installed by the design, engineering, and installation team and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(7)(ii)(A) through (D).

(A) Large solar systems must be installed in accordance with local, State, and national building and electrical codes and regulations. Identify zoning,

building and electrical code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify available component warranties for the specific project location and size.

(C) Large solar electric systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, describe the applicable local net metering program.

(D) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.* wetland fill, endangered species, water quality, hazard materials handling, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Describe the local solar resource where the solar system is to be installed. Acceptable sources of solar resource data include state solar maps and nearby weather station data. Incorporate information from state solar resource maps when possible. Indicate the source of the solar data and assumptions made when applying nearby solar data to the site.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards.

(A) For large solar electric systems, the engineering must be comprehensive, including solar collector design and selection, support structure design and selection, power conditioning design and selection, surface or submersible water pumps and energy storage requirements as applicable, and selection of cabling, disconnects and interconnection equipment. A complete set of engineering drawings, stamped by

a professional engineer must be provided.

(B) For large solar thermal systems, the engineering must be comprehensive, including solar collector design and selection, support structure design and selection, pump and piping design and selection, and energy storage design and selection. Provide a complete set of engineering drawings, stamped by a professional engineer.

(C) For either type of system, provide a concise but complete description of the large solar system including location of the project and proposed equipment and system specifications. Identify possible vendors and models of major system components. Provide the expected system energy production based on available solar resource data on a monthly (when possible) and annual basis and how the energy produced by the system will be used.

(D) For either type of system, provide a description of the project site and address issues such as solar access, orientation, proximity to the load or the electrical grid, environmental concerns such as land use, water quality, wildlife, habitat fragmentation, aesthetics, unique safety concerns, construction, and installation issues and whether special circumstances exist.

(E) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including design and engineering, permitting, equipment, site preparation, system installation, system startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives. Provide a detailed description of historic or expected energy use and expected



energy offsets or sales on a monthly and annual basis.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Large solar systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Provide a detailed description of equipment certification. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment, including cranes and other devices, needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 5-year warranty for equipment. Provide information regarding system warranty and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedules for the mechanical and electrical and software systems;

(C) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance; and

(D) Provide information regarding expected system design life and timing of major component replacement or rebuilds. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements such as proper disposal or recycling procedures to reduce potential hazardous chemical

contamination and costs for removal and disposal of the system.

(8) *Wind, small.* The technical requirements specified in paragraphs (d)(8)(i) through (x) apply to wind energy systems for which the rated power of the wind turbine is 100kW or smaller and with a generator hub height of 120 ft or less. Such systems are considered small wind systems. The major components of a small wind system are the wind turbine, the tower, the foundation, the inverter, the interconnection equipment and energy storage when applicable. A small wind system is either stand-alone or connected to the local electrical system at less than 600 volts.

(i) *Qualifications of project team.* The small wind project team should consist of a system designer, a project manager or general contractor, an equipment supplier of major components, a system installer, a system maintainer, and, in some cases, the owner of the application or load served by the system. One individual or entity may serve more than one role.

The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the small wind turbine manufacturers and other equipment suppliers of major components being considered in terms of the length of time in business and the number of units installed at the capacity and scale being considered;

(B) Describe the knowledge, skills, and abilities needed to service, operate, and maintain the system for the proposed application; and

(C) Discuss the project manager, system designer, and system installer qualifications for engineering, designing, and installing small wind systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar systems designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(8)(ii)(A) through (D).

(A) Small wind systems must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Identify zoning, building and electrical code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify available component warranties for the specific project location and size.

(C) Small wind systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements. This is required even if the system is installed on the customer side of the utility meter. For systems planning to utilize a local net metering program, describe the applicable local net metering program.

(D) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.*) wetland fill, endangered species, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for the system to operate as designed. Indicate the local wind resource where the small wind turbine is to be installed. Acceptable sources of wind resource data include state wind maps and nearby weather station data. Incorporate information from state wind resource maps when possible. Indicate the source of the wind data and the conditions of the wind monitoring when collected at the site or assumptions made when applying nearby wind data to the site.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards. Small wind systems must be engineered by either the wind turbine manufacturer or other qualified party. Systems must be offered as a complete, integrated system with matched components. The engineering must be comprehensive including turbine design and selection, tower design and selection, specification of guy wire

anchors and tower foundation, inverter/controller design and selection, energy storage requirements as applicable, and selection of cabling, disconnects and interconnection equipment, as well as the engineering data needed to match the wind system output to the application load, if applicable.

(A) The application must include a concise but complete description of the small wind system including location of the project, proposed turbine specifications, tower height and type of tower, type of energy storage and location of storage if applicable, proposed inverter manufacturer and model, electric power system interconnection equipment, and application load and load interconnection equipment as applicable. Identify possible vendors and models of major system components. Provide the expected system energy production based on available wind resource data on a monthly (when possible) and annual basis and how the energy produced by the system will be used.

(B) The application must include a description of the siting criteria used in selecting the project site and address issues such as site access, foundations, backup equipment when applicable, access to the wind resource, proximity to the electrical grid or application load, and environmental issues with emphasis on land use, noise pollution, soil degradation, wildlife including migratory birds and bats, habitat fragmentation, aesthetics, and other construction and installation issues and whether special circumstances such as proximity to airports exist when applicable to this type of technology. Provide a 360-degree panoramic photograph of the proposed site including indication of prevailing winds when possible.

(C) Sites and application loads must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated Federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the

proposed project to demonstrate the financial performance of the project. Provide a detailed analysis and description of project costs including design, permitting, equipment, site preparation, system installation, system startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives. Provide a detailed description of historic or expected energy use and expected energy offsets or sales on a monthly and annual basis.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Small wind systems may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Provide a detailed description of equipment certification. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment, including cranes and other devices, needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 5-year warranty for equipment and a commitment from the supplier to have spare parts available. Provide information regarding system warranty and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedules for the mechanical and electrical and software systems;

(C) Provide historical or engineering information that supports expected

design life of the system and timing of major component replacement or rebuilds. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for in or outsourcing; and

(D) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, and costs for removal and disposal of the system.

(9) *Wind, large.* The technical requirements specified in paragraphs (d)(9)(i) through (x) apply to wind energy systems for which the rated power of the individual wind turbine(s) is larger than 100kW. Such systems are considered large wind systems. The major components of a large wind system are the wind turbine rotor, the gearbox, the generator, the tower, the power electronics, the local collection grid, and the interconnection equipment.

(i) *Qualifications of project team.* The large wind project team should consist of a project manager, a meteorologist, an equipment supplier, a project engineer, a primary or general contractor, construction contractor, and a system operator and maintainer and in some cases the owner of the application or load served by the system. One individual or entity may serve more than one role.

The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the proposed project delivery method. Such methods include a design, bid, build where a separate engineering firm may design the project and prepare a request for bids and the successful bidder constructs the project at the applicant's risk, and a design build method, often referred to as turn key, where the applicant establishes the specifications for the project and secures the services of a developer who will design and build the project at the developers risk;

(B) Discuss the large wind turbine manufacturers and other equipment suppliers of major components being considered in terms of the length of time in business and the number of units

installed at the capacity and scale being considered;

(C) Discuss the project manager, equipment supplier, project engineer, and construction contractor qualifications for engineering, designing, and installing large wind systems including any relevant certifications by recognized organizations or bodies. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available;

(D) Discuss the qualifications of the meteorologist, including references; and

(E) Describe system operator's qualifications and experience for servicing, operating, and maintaining the system for the proposed application. Provide a list of the same or similar projects designed, installed, or supplied and currently operating and with references if available.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(9)(ii)(A) through (E).

(A) Large wind systems must be installed in accordance with local, State, and national building and electrical codes and regulations. Identify zoning, building and electrical code issues, and required permits and the schedule for meeting those requirements and securing those permits.

(B) Identify land use agreements required for the project and the schedule for securing the agreements and the term of those agreements.

(C) Identify available component warranties for the specific project location and size.

(D) Large wind systems interconnected to the electric power system will need arrangements to interconnect with the utility. Identify utility system interconnection requirements, power purchase arrangements, or licenses where required and the schedule for meeting those requirements and obtaining those agreements.

(E) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (i.e. wetland fill, endangered species, etc.)

(iii) *Resource assessment.* The applicant must provide adequate and appropriate evidence of the availability of the renewable resource required for

the system to operate as designed. Indicate the local wind resource where the wind turbine is to be installed. Wind resource maps may be used as an acceptable preliminary source of wind resource data. Projects greater than 500kW must obtain wind data from the proposed project site. For such projects, describe the proposed measurement setup for the collection of the wind resource data. For proposed projects with an established wind resource, provide a summary of the wind resource and the specifications of the measurement setup. Large wind systems larger than 500kW in size will typically require at least 1 year of on-site monitoring. If less than 1 year of data is used, the qualified meteorological consultant must provide a detailed analysis of correlation between the site data and a nearby long-term measurement site.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards. Large wind systems must be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive including site selection, turbine selection, tower selection, tower foundation, design of the local collection grid, interconnection equipment selection, and system monitoring equipment. For stand alone, non-grid applications, engineering information must be provided that demonstrates appropriate matching of wind turbine and load.

(A) The application must include a concise but complete description of the large wind project including location of the project, proposed turbine specifications, tower height and type of tower, the collection grid, interconnection equipment, and monitoring equipment. Identify possible vendors and models of major system components. Provide the expected system energy production based on available wind resource data on a monthly and annual basis. For wind projects larger than 500kW in size, provide the expected system energy production over the life of the project including a discussion on inter-annual variation using a comparison of the on-site monitoring data with long-term meteorological data from a nearby monitored site.

(B) The application must include a description of the siting criteria used in selecting the project site and address issues such as site access, foundations, backup equipment when applicable, proximity to the electrical grid or application load, and environmental issues with emphasis on land use, noise pollution, soil degradation, wildlife including migratory birds and bats, habitat fragmentation, aesthetics, and other construction, and installation issues and whether special circumstances such as proximity to airports exist.

(C) Sites must be controlled by the agricultural producer or small business for the proposed project life or for the financing term of any associated federal loans or loan guarantees.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including resource assessment, system and site design, permits and agreements, equipment procurement, and system installation from excavation through startup and shakedown.

(vi) *Financial feasibility.* The applicant must provide a study that describes costs and revenues of the proposed renewable energy system(s) to demonstrate the financial performance of the renewable energy system(s). Provide a detailed analysis and description of project costs including project management, resource assessment, project design, project permitting, land agreements, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, professional services, and operations and maintenance costs. Provide a detailed description of applicable investment, productivity, tax, loan, and grant incentives. Provide a detailed analysis and description of annual project revenues including electricity sales, production tax credits, revenues from green tags, and any other production incentive programs throughout the life of the project. Provide a description of planned contingency fees or reserve funds to be used for unexpected large component replacement or repairs and for low productivity periods.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Large wind turbines may be constructed of components manufactured in more than

one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Provide a detailed description of equipment certification. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(vii) *Equipment installation.* The applicant must fully describe the management of and plan for site development and system installation, provide details regarding the scheduling of major installation equipment, including cranes or other devices, needed for project construction, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The applicant must:

(A) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding turbine warranties and availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed project, including maintenance schedules for the mechanical and electrical systems and system monitoring and control requirements;

(C) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;

(D) Provide and discuss the risk management plan for handling large, unanticipated failures of major components such as the turbine gearbox or rotor. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing;

(E) Describe opportunities for technology transfer for long term project operations and maintenance by a local entity or owner/operator; and

(F) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, and costs for removal and disposal of the system.

(10) *Energy efficiency.* The technical requirements specified in paragraphs (d)(10)(i) through (ix) apply to projects that involve improvements to a facility, building or process resulting in reduced energy consumption or reduced amount of energy required per unit of production are regarded as energy efficiency projects. Projects in excess of \$50,000 require a full energy audit. The system engineering for such projects must be performed by a qualified entity certified Professional Engineer.

(i) *Qualifications of project team.* The energy efficiency project team is expected to consist of an energy auditor, a project manager, an equipment supplier of major components, a project engineer, and a construction contractor or system installer. One individual or entity may serve more than one role.

The applicant must provide authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services. The applicant must also provide authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life. The applicant must:

(A) Discuss the qualifications of the various project team members including any relevant certifications by recognized organizations or bodies;

(B) Describe qualifications or experience of the team as related to installation, service, operation and maintenance of the project;

(C) Provide a list of the same or similarly engineered projects designed, installed, or supplied by the team or by team members and currently operating. Provide references if available; and

(D) Discuss the manufacturers of major energy efficiency equipment being considered including length of time in business.

(ii) *Agreements and permits.* The applicant must identify all necessary agreements and permits required for the energy efficiency improvement(s) and the status and schedule for securing those agreements and permits, including the items specified in paragraphs (d)(10)(ii)(A) through (C).

(A) Energy efficiency improvements must be installed in accordance with local, State, and national building and electrical codes and regulations. Identify building code, electrical code, and zoning issues and required permits, and the schedule for meeting those requirements and securing those permits.

(B) Identify available component warranties for the specific project location and size.

(C) Describe all potential environmental impacts resulting from siting issues, construction and operation of the proposed project. Identify other site or design alternatives that were considered in your planning process. Identify all environmental compliance issues such as required permits (*i.e.* wetland fill, endangered species, air quality, State Water Quality Certification, NPDES, etc.)

(iii) *Energy assessment.* The applicant must provide adequate and appropriate evidence of energy savings expected when the system is operated as designed.

(A) The application must include information on baseline energy usage (preferably including energy bills for at least 1 year), expected energy savings based on manufacturers specifications or other estimates, estimated dollars saved per year, and payback period in years (total investment cost equal to cumulative total dollars of energy savings). Calculation of energy savings should follow accepted methodology and practices. System interactions should be considered and discussed.

(B) For energy efficiency improvement projects in excess of \$50,000, an energy audit is required. An energy audit is a written report by an independent, qualified entity that documents current energy usage, recommended potential improvements and their costs, energy savings from these improvements, dollars saved per year, and simple payback period in years (total costs divided by annual dollars of energy savings). The methodology of the energy audit must meet professional and industry standards. The energy audit must cover the following:

(1) *Situation report.* Provide a narrative description of the facility or process, its energy system(s) and usage, and activity profile. Also include price per unit of energy (electricity, natural gas, propane, fuel oil, renewable energy, etc.) paid by the customer on the date of the audit. Any energy conversion should be based on use rather than source.

(2) *Potential improvements.* List specific information on all potential energy-saving opportunities and their costs.

(3) *Technical analysis.* Give consideration to the interactions among the potential improvements and other energy systems:

(i) Estimate the annual energy and energy costs savings expected from each improvement identified in the potential project.

(ii) Calculate all direct and attendant indirect costs of each improvement.

(iii) Rank potential improvements measures by cost-effectiveness.

(4) *Potential improvement description.* Provide a narrative summary of the potential improvement and its ability to provide needed benefits, including a discussion of non-energy benefits such as project reliability and durability.

(i) Provide preliminary specifications for critical components.

(ii) Provide preliminary drawings of project layout, including any related structural changes.

(iii) Document baseline data compared to projected consumption, together with any explanatory notes. When appropriate, show before-and-after data in terms of consumption per unit of production, time or area. Include at least 1 year's bills for those energy sources/fuel types affected by this project. Also submit utility rate schedules, if appropriate.

(iv) Identify significant changes in future related operations and maintenance costs.

(v) Describe explicitly how outcomes will be measured.

(iv) *Design and engineering.* The applicant must provide authoritative evidence that the energy efficiency improvement(s) will be designed and engineered so as to meet its intended purpose and need, ensure public safety, mitigate any adverse environmental impacts, and comply with applicable laws, regulations, agreements, permits, codes, and standards.

(A) Energy efficiency improvement projects in excess of \$50,000 must be engineered by a qualified entity. Systems must be engineered as a complete, integrated system with matched components.

(B) For all energy efficiency improvement projects, identify and itemize major energy efficiency improvements including associated project costs. Specifically delineate which costs of the project are directly associated with energy efficiency improvements. Describe the components, materials or systems to be installed and how they improve the energy efficiency of the process or facility being modified. Discuss passive improvements that reduce energy loads, such as improving the thermal efficiency of a storage facility, and active improvements that directly reduce energy consumption, such as replacing existing energy consuming equipment with high efficiency equipment, as separate topics. Discuss any anticipated synergy between active and passive improvements or other energy systems. Include in the discussion any change in on-site

effluents, pollutants, or other by-products.

(C) Identify possible suppliers and model of major pieces of equipment.

(v) *Project development schedule.* The applicant must identify each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through startup and shakedown. Provide a detailed description of the project timeline including energy audit (if applicable), system and site design, permits and agreements, equipment procurement, and system installation from site preparation through startup and shakedown.

(vi) *Financial feasibility.* Provide a detailed description of project costs including any design, permitting, equipment, materials, site preparation, installation, warranties, insurance, financing, professional services, and operations and maintenance costs. Referencing information developed in section (iii) Energy Assessment in this subsection, provide a detailed description of monthly and annual energy and cost savings associated with the project. Provide a detailed description of applicable investment, productivity, tax, loan, or grant incentives.

(vii) *Equipment procurement.* The applicant must demonstrate that equipment required for the energy efficiency improvement(s) is available and can be procured and delivered within the proposed project development schedule. Energy efficiency improvements may be constructed of components manufactured in more than one location. Provide a description of any unique equipment procurement issues such as scheduling and timing of component manufacture and delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory. Provide a detailed description of equipment certification. Procurement must be made in accordance with the requirements of 7 CFR part 3015.

(viii) *Equipment installation.* The applicant must fully describe the management of and plan for installation of the energy efficiency improvement(s), identify specific issues associated with installation, provide details regarding the scheduling of major installation equipment needed for project discussion, and provide a description of the startup and shakedown specification and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include in this discussion any unique concerns, such as

the effects of energy efficiency improvements on system power quality.

(ix) *Operations and maintenance.* The applicant must identify the operations and maintenance requirements of the energy efficiency improvement(s) necessary for the energy efficiency improvement(s) to operate as designed over the design life. The applicant must:

(A) Provide information regarding component warranties and the availability of spare parts;

(B) Describe the routine operations and maintenance requirements of the proposed project, including maintenance schedules for the mechanical and electrical systems and system monitoring and control requirements;

(C) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;

(D) Provide and discuss the risk management plan for handling large, unanticipated failures of major components. Include in the discussion, costs and labor associated with operations and maintenance of system and plans for insourcing or outsourcing; and

(E) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance.

(x) *Decommissioning.* When uninstalling or removing the project, describe the decommissioning process. Describe any issues, any environmental compliance requirements, and costs for removal and disposal of the system.

#### *Evaluation of Grant Applications*

(a) *General review.* The Agency will evaluate each application and make a determination whether the applicant is eligible, the proposed grant is for an eligible project, and the proposed grant complies with all applicable statutes and regulations.

(b) *Ineligible or incomplete applications.* If the applicant is ineligible or the application is incomplete, the Agency will inform the applicant in writing of the decision, reasons therefore, and any appeal rights, and no further evaluation of the application will occur.

(c) *Technical eligibility determination.* The Agency's determination of a project's technical eligibility will be based on the information provided by the applicant and on other sources of information, such as recognized industry experts in the applicable technology field, as necessary, to determine technical eligibility of the proposed project.

(d) *Evaluation criteria.* Agency personnel will score and fund each application based on the evaluation criteria specified in this section. These criteria must be individually addressed in narrative form on a separate sheet of paper.

(1) Quantity of energy replaced, produced, or saved. Points may only be awarded for only one of the following three categories:

(i) *Energy replacement.* If the proposed renewable energy system is intended primarily for self use by the agricultural producer or rural small business and will provide energy replacement of greater than 0 but equal to or less than 25 percent, 5 points will be awarded; greater than 25 percent, but equal to or less than 50 percent, 10 points will be awarded; or greater than 50 percent, 15 points will be awarded. The energy replacement should be determined by dividing the estimated quantity of renewable energy to be generated over a 12-month period by the estimated quantity of energy consumed over the same 12-month period by applicable agricultural or rural small business process(es). The estimated quantities of energy must be converted to either BTUs, Watts, or similar energy equivalents to facilitate scoring. If the estimated energy produced equals more the 150 percent of the energy requirements of the applicable process(es), the project will be scored as an energy generation project.

(ii) *Energy savings.* If the estimated energy expected to be saved by the installation of the energy efficiency improvements will be 35 percent or greater, 15 points will be awarded; 30 and up to but not including 35 percent, 10 points will be awarded; or 20 and up to but not including 30 percent, 5 points will be awarded. Energy savings will be determined by the projections in an energy assessment or audit. Projects with total eligible project costs equal to or less than \$50,000 that opt to obtain a professional energy audit will be awarded an additional 5 points.

(iii) *Energy generation.* If the proposed renewable energy system is intended primarily for production of energy for sale, 10 points will be awarded.

(2) *Environmental benefits.* Points may only be awarded in only one of the following two categories.

(i) *Health and Sanitary Standards:* If the purpose of the proposed system is to upgrade an existing facility or construct a new facility required to exceed applicable health or sanitary standards where the system is installed, environmental points will be awarded. Points will only be awarded for this

paragraph if documentation is provided that a bona fide standard exists, what that standard is, that the proposed project exceeds the standard, and by how much the standard is exceeded.

(A) If the purpose of the above system is to exceed applicable standards by more than 5 percent, 2 points will be awarded.

(B) If the purpose of the above system is to exceed applicable standards by more than 10 percent, 5 points will be awarded.

(ii) *Environmental Goals.* If the purpose of the proposed system contributes to the environmental goals and objectives of other Federal, State, or local programs, 5 points will be awarded. Points will only be awarded for this paragraph if the applicant is able to provide documentation from an appropriate authority supporting this claim.

(3) *Commercial availability.* If the proposed system or improvement is currently commercially available and replicable, 5 points will be awarded. If the proposed system or improvement is commercially available and replicable and is also provided with a 5-year or longer warranty providing the purchaser protection against system degradation or breakdown or component breakdown, 10 points will be awarded.

(4) *Technical Merit Score.* Each subparagraph within this paragraph will be scored according to the following: If the description has no significant weaknesses and exceeds the requirements of the subparagraph, 100 percent of the total possible score for the subparagraph will be awarded. If the description has one or more significant strengths, and meets the requirements of the subparagraph, 80 percent of the points will be awarded. If the description meets the basic requirements of this paragraph but also has several weaknesses, 60 percent of the points will be awarded. If the description is lacking in one or more critical aspects, key issues have not been addressed, but the description demonstrates some merit or strengths, 40 percent of the points will be awarded. If the description has serious deficiencies, internal inconsistencies or is missing information, 20 percent of the points will be awarded. If the description has no merit in this area, 0 percent of the points will be awarded.

The score for each subparagraph will be weighted as a percentage of the total technical merit score of 35 points.

(i) *Qualifications of the project team* (10 percent of 35 points).

(ii) *Agreements and Permits* (5 percent of 35 points).

(iii) *Energy or Resource Assessment* (10 percent of 35 points).

(iv) *Design and Engineering* (30 percent of 35 points).

(v) *Project Development Schedule* (5 percent of 35 points).

(vi) *Financial Feasibility* (20 percent of 35 points).

(vii) *Equipment Procurement* (5 percent of 35 points).

(viii) *Equipment Installation* (5 percent of 35 points).

(ix) *Operations and Maintenance* (5 percent of 35 points).

(x) *Decommissioning* (5 percent of 35 points).

(5) *Readiness.* If the agricultural producer or rural small business has written commitments from the source confirming commitment of 100 percent of the matching funds by the application deadline, 15 points will be awarded. If the agricultural producer or small rural business has written commitments from the source confirming commitment of 75 percent of the matching funds by the application deadline, 10 points will be awarded. If the agricultural producer or small business has written commitments from the source confirming commitment of 50 percent of the matching funds by the application deadline, 5 points will be awarded.

(6) *Small agricultural producer/ Very Small Business.* If the applicant is an agricultural producer producing agricultural products with a gross market value of less than \$1 million in the preceding year, 5 points will be awarded. If the applicant is an agricultural producer producing agricultural products with a gross market value of less than \$600,000 in the preceding year, 10 points will be awarded. If the applicant is an agricultural producer producing agricultural products with a gross market value of less than \$200,000 in the preceding year or is a Very Small Business, 15 points will be awarded.

(7) *Previous grantees and borrowers.* If an applicant has not been awarded a grant under this program within the previous 2 years 10 points will be awarded.

(8) *Return on Investment.* If the proposed project will return the cost of the investment in less than 4 years, 5 points will be awarded; 4–7 years, 2 points will be awarded; or 8–11 years, 1 point will be awarded.

#### *Insurance Requirements*

Insurance is required to protect the interest of the recipient of funds under this notice and the Agency. The coverage must be maintained for the life of the grant unless this requirement is

waived or modified by the Agency in writing. In addition:

(a) Worker compensation insurance is required in accordance with State law;

(b) National flood insurance is required in accordance with 7 CFR part 1806, subpart B; and

(c) Business interruption insurance will be required.

#### *Laws That Contain Other Compliance Requirements*

The applicant must comply with all applicable laws, regulations, Executive Orders, and other generally applicable requirements, including those contained in 7 CFR part 3015 and such other statutory provision as are specifically contained herein.

(a) *Equal employment opportunity.* For all construction contracts and grants in excess of \$10,000, the contractor must comply with Executive Order 11246 as amended by Executive Order 11375, and as supplemented by applicable Department of Labor regulations (41 CFR part 60). The applicant and borrower are responsible for ensuring that the contractor complies with these requirements.

(b) *Civil rights compliance.* Recipients of direct loans and grants must comply with Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973. This may include collection and maintenance of data on the race, sex, and national origin on the recipient's membership/ownership and employees. These data should be available to conduct compliance reviews in accordance with 7 CFR part 1901, subpart E, section 1901.204. Initial reviews will be conducted after Form RD 400-4, is signed and one post award compliance review within 90 days after grant funds have been disbursed. The Agency should be contacted to provide further guidance on collection of information and compliance with Civil Rights laws.

(c) *National Environmental Policy Act (NEPA).* Each applicant must prepare Form RD 1940-20. The State Rural Development Office will review the information provided and advise the applicant of the specific and necessary environmental review and analysis to be completed for compliance with NEPA pursuant to 7 CFR part 1940, subpart G. A site visit by the Agency will be scheduled, if necessary, to determine the scope of the review. The applicant will be notified of all specific compliance requirements, such as the publication of public notices. All required environmental analysis and compliance will be completed prior to grant obligation. The taking of any actions or incurring any obligations during the time of application or application review and processing that would either limit the range of alternatives to be considered or that would have an adverse effect on the environment, such as the initiation of construction, will result in project ineligibility.

(d) *Executive Order 12898.* When grant and loans (direct or guaranteed) are proposed, the Agency will conduct a Civil Rights Impact Analysis in regard to environmental justice utilizing Form RD 2006-38, "Civil Rights Impact Analysis Certification." This must be done prior to loan approval, obligation of funds, including issuance of a Letter of Conditions, whichever occurs first.

#### *Construction Planning and Performing Development*

The requirements of 7 CFR part 1924, subpart A, apply for construction of renewable Energy Systems and Energy Efficiency Improvement projects as applicable.

Recipients of grants are not authorized to construct the facility, project, or improvement in total, or in part, or utilize their own personnel and/or equipment.

The Agency intends to promulgate a final regulation implementing the Section 9006 energy program later in FY 2005. If the Agency promulgates such a final regulation, the applicant may, by written notice to the Agency, elect to comply with the subsequent construction planning and performing development requirements in such final regulation in lieu of the requirements of 7 CFR part 1924, subpart A.

#### *Grantee Requirements*

(a) Letter of Conditions, which is prepared by the Agency, establishes conditions that must be understood and agreed to by the applicant before any obligation of funds can occur. The applicant must sign Letter of Intent to Meet Conditions and Form 1940-1, "Request for Obligation of Funds," if they accept the conditions of the grant. These forms will be enclosed with the Letter of Conditions. The grant will be obligated when the Agency receives an executed Letter of Intent and Request for Obligation of Funds from the applicant agreeing to all provisions in the Letter of Conditions.

(b) The grantee must sign a Grant Agreement (which is published at the end of the NOFA) and abide by all requirements contained in the Grant Agreement or any other Federal statutes or regulations governing this program. Failure to follow the requirements may result in termination of the grant and adoption of other remedies provided for in the Grant Agreement.

#### *Servicing Grants*

Grants will be serviced in accordance with 7 CFR part 1951, subpart E and the Grant Agreement.

Dated: March 17, 2005.

**Gilbert Gonzalez,**

*Acting Under Secretary, Rural Development.*

**BILLING CODE 3410-XY-P**

**UNITED STATES DEPARTMENT OF AGRICULTURE  
RURAL DEVELOPMENT**

FORM APPROVED  
OMB No. 0570-0044

**RENEWABLE ENERGY/ENERGY EFFICIENCY GRANT AGREEMENT  
RENEWABLE ENERGY SYSTEMS AND  
ENERGY EFFICIENCY IMPROVEMENTS GRANT PROGRAM**

*The purpose of this agreement is to identify the terms and conditions to be fulfilled by the Grantee upon award of a grant under the Renewable Energy Systems and Energy Efficiency Improvements Grant Program of Rural Development, United States Department of Agriculture. Provide the requested information, read this agreement in its entirety, and sign in the space on the last page. Your signature indicates consent with this agreement.*

1. Case No.		2. Grant No.	
3. Grantee Name:		4. Address of Grantee:	
5. Total Estimated Eligible Project Cost:		6. Amount of Grant:	7. Grant Amount as Percent of Total Estimate Eligible Project Cost:
8. Amount of Funds Available from Other Sources:		9. Location of Project	
<p>This Grant Agreement covers the project described below (use continuation sheets as necessary). You may elect to attach a copy of the project description from the application if the description is still current.</p>			

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0570-0044. The time required to complete this information collection is estimated to average 30 minutes 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.



This Grant Agreement covers the following described real property (use continuation sheets as necessary).

This Grant Agreement covers the following described equipment (use continuation sheets as necessary):

Item	Useful Life

### General Grantee Certifications

This GRANT AGREEMENT is a contract for receipt of grant funds under the Renewable Energy/Energy Efficiency program (Title IX, Section 9006 of Pub. L. 107-171) between the Grantee and the United States of America acting through Rural Development, Department of Agriculture (Grantor). All references herein to "Project" refer to installation of a renewable energy system or energy efficiency improvement at the location identified in Block 9. Should actual project costs be lower than projected in the agreement (see Block 5), the final amount of grant will be adjusted to remain at the percentage (identified in Block 7) of the final Eligible Project Cost.

#### (1) Assurance Agreement

Grantee assures the Grantor that Grantee is in compliance with and will comply in the course of the Agreement with all applicable laws, regulations, Executive Orders, and other generally applicable requirements, including those contained in 7 CFR part 3015, "Uniform Federal Assistance Regulations," which are incorporated into this agreement by reference, and such other statutory provisions as are specifically contained herein.

Grantee and Grantor agree to all of the terms and provisions of any policy or regulations promulgated under Title IX, Section 9006 of the Farm Security and Rural Investment Act of 2002 as amended. Any application submitted by the Grantee for this grant, including any attachments or amendments, are incorporated and included as part of this Agreement. Any changes to these documents or this Agreement must be approved in writing by the Grantor.

The Grantor may terminate the grant in whole, or in part, at any time before the date of completion, whenever it is determined that the Grantee has failed to comply with the conditions of this Agreement.

#### (2) Use of Grant Funds

Grantee will use grant funds and leveraged funds only for the purposes and activities specified in the application approved by the Grantor including the approved budget. Budget and approved use of funds are as further described in the Grantor Letter of Conditions and amendments or supplements thereto. Any uses not provided for in the approved budget must be approved in writing by the Grantor. The proposed Renewable Energy System or Energy Efficiency Improvements shall be constructed/installed in accordance with any energy audit recommendations or engineering or other technical reports provided by the Grantee and approved by the Grantor.

#### (3) Civil Rights Compliance

Grantee will comply with Executive Order 12898, Title VI of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973. This shall include collection and maintenance of data on the race, sex, disability, faith based (if applicable) and national origin of Grantee's membership/ownership and employees. This data must be available to the Grantor in its conduct of

Civil Rights Compliance Reviews, which will be conducted prior to grant closing and 3 years later, unless the final disbursement of grant funds has occurred prior to that date.

#### (4) Financial Management Systems

A. Grantee will provide a Financial Management System in accordance with 7 CFR part 3015, including but not limited to:

(1) Records that identify adequately the source and application of funds for grant-supported activities. Those records shall contain information pertaining to grant awards and authorizations, obligations, unobligated balances, assets, liabilities, outlays, and income;

(2) Effective control over and accountability for all funds, property, and other assets. Grantees shall adequately safeguard all such assets and ensure that they are used solely for authorized purposes;

(3) Accounting records prepared in accordance with generally accepted accounting principles (GAAP) and supported by source documentation; and

(4) Grantee tracking of fund usage and records that show matching funds and grant funds are used in equal proportions. The grantee will provide verifiable documentation regarding matching funds usage, i.e., bank statements or copies of funding obligations from the matching source.

B. Grantee will retain financial records, supporting documents, statistical records, and all other records pertinent to the grant for a period of at least 3 years after final grant disbursement, except that the records shall be retained beyond the 3-year period if audit findings have not been resolved. The Grantor and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Grantee which are pertinent to the grant for the purpose of making audits, examinations, excerpts, and transcripts.

#### (5) Procurement and Construction

A. Grantee will comply with the applicable procurement requirements of 7 CFR part 3015 regarding standards of conduct, open and free competition, access to contractor records, and equal employment opportunity requirements.

B. Grantee will, for construction contracts in excess of \$100,000, provide performance and payment bonds for 100 percent of the contract price.

#### (6) Acquired Property

A. Grantee will in accordance with 7 CFR part 3015, hold title to all real property identified as part of the project costs, including improvements to land, structures or things attached to them. Movable machinery and other kinds of equipment are not real property (see Item 2 below). In addition:

(1) Approval may be requested from Grantor to transfer title to an eligible third party for continued use for originally authorized purposes. If approval is given, the terms of the transfer shall provide that the transferee must assume all the rights and obligations of the transferor, including the terms of this Grant Agreement; and

(2) If the real property is no longer to be used as provided above, disposition instructions of the Grantor shall be requested and followed. Those instructions will provide for one of the following alternatives:

a. The Grantee may be directed to sell the property, and the Grantor shall have a right to an amount computed by multiplying the Federal (Grantor) share of the property times the proceeds from sale (after deducting actual and reasonable selling and fix-up expenses, if any, from the sale proceeds). Proper sales procedures shall be followed which provide for competition to the extent practicable and result in the highest possible return.

b. The Grantee shall have the opportunity of retaining title. If title is retained, Grantor shall have the right to an amount computed by multiplying the market value of the property by the Federal share of the property.

c. The Grantee may be directed to transfer title to the property to the Federal Government provided that, in such cases, the Grantee shall be entitled to compensation computed by applying the Grantee's percentage of participation in the cost of the program or project to the current fair market value of the property.

Disposition requirements for real property shall expire 20 years from the date of final grant disbursement. This Grant Agreement covers the real property described in Block 10.

Grantee will abide by the requirements of 7 CFR part 3015 pertaining to equipment, which is acquired wholly or in part with grant funds.

B. Disposition requirements for equipment will expire at the end of each item's useful life (which is based on a straight-line, non-accelerated method). This Grant Agreement covers the equipment described in Block 11. Grantee agrees not to encumber, transfer, or dispose of the property or any part thereof, acquired wholly or in part with Grantor funds, without the written consent of the Grantor.

C. If required by Grantor, record liens or other appropriate notices of record to indicate that personal or real property has been acquired or improved with Federal grant funds, and that use and disposition conditions apply to the property as provided by 7 CFR part 3015.

#### (7) Reporting

A. Grantee will after grant approval through project construction:

(1) Provide periodic reports as required by the Grantor. A financial status report and a project performance report will be required on a quarterly basis (due 30 working days after end of the quarter. For the purposes of this grant, quarters end on March 31, June 30, September 30, and December 31). The financial status report must show how grant funds and leveraged funds have been used to date and project the funds needed and their purposes for the next quarter. A final report may serve as the last quarterly report. Grantees shall constantly monitor performance to ensure that time schedules are being met and projected goals by time periods are being accomplished. The project performance reports shall include the following:

a. A comparison of actual accomplishments to the objectives for that period.

b. Reasons why established objectives were not met, if applicable.

c. Reasons for any problems, delays, or adverse conditions which will affect attainment of overall program objectives, prevent meeting time schedules or objectives, or preclude the attainment of particular objectives during established time periods. This disclosure shall be accomplished by a statement of the action taken or planned to resolve the situation.

d. Objectives and timetables established for the next reporting period.

(2) Final project development report which includes a detailed project funding and expense summary; summary of facility installation/construction process including recommendations for development of similar projects by future applicants to the program.

(3) For the year(s) in which grant funds are received, Grantee will provide an annual financial statement to Grantor.

B. Grantee will after project construction:

1. Allow Grantor access to the project and its performance information during its useful life; and

2. Provide periodic reports as required by Grantor and permit periodic inspection of the project by a representative of the Grantor. Grantee reports will include but not be limited to the following:

a. Purchase of Renewable Energy System Project Report. Commencing the first full calendar year following the year in which project construction was completed and continuing for 3 full years, a report detailing the following will be provided:

i. Quantity of Energy Produced. Grantee to report the actual amount of energy produced

in BTUs, kilowatt-hours, or similar energy equivalents.

ii. Environmental Benefits. If applicable, Grantee to provide documentation that identified health and/or sanitation problem has been solved.

iii. Return on Investment. Grantee to provide the annual income and/or energy savings of the renewable energy system.

iv. Summary of the cost of operating and maintaining the facility.

v. Description of any maintenance or operational problems associated with the facility.

vi. Recommendations for development of future similar projects.

b. Energy Efficiency Improvement Project Report. Commencing the first full calendar year following the year in which project construction was completed and continuing for 2 full years. Grantee will report the actual amount of energy saved due to the energy efficiency improvements.

#### (8) Grant Disbursement

Grantee will disburse grant funds as scheduled. Unless required by funding partners to be provided on a pro rata basis with other funding sources, grant funds will be disbursed after all other funding sources have been expended.

A. Requests for reimbursement may be submitted monthly or more frequently if authorized to do so by the Grantor. Ordinarily, payment will be made within 30 days after receipt of a proper request for reimbursement.

B. Grantee shall not request reimbursement for the Federal share of amounts withheld from contractors to ensure satisfactory completion of work until after it makes those payments.

C. Payment shall be made by electronic funds transfer.

D. Standard Form 271, "Outlay Report and Request for Reimbursement for Construction Programs," or other format prescribed by Grantor shall be used to request Grant reimbursements.

E. For renewable energy projects, grant funds will be disbursed in accordance with the above through 90 percent of grant disbursement. The final 10 percent of grant funds will be held by the Grantor until construction of the project is completed, operational, and has met or exceeded the test run requirements as set out in the grant award requirements.

#### (9) Post-Disbursement Requirements

Grantee will own, operate, and provide for continued maintenance of the project.

*In witness whereof*, Grantee has this day authorized and caused this Agreement to be signed in its name and its corporate seal to be hereunto affixed and attested by its duly authorized officers thereunto, and the Grantor has caused this Agreement to be duly executed in its behalf by:

Name:  
Title:

Date  
United States of America Rural Development  
By: \_\_\_\_\_

Name:  
Title:

Date

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