

Part 4280 - LOANS AND GRANTS

Subpart B - Renewable Energy Systems and Energy Efficiency Improvements  
Program

TABLE OF CONTENTS

<u>Sec.</u>		<u>Page</u>
<b>General</b>		
4280.101	Purpose.	1
4280.102	General.	1
4280.103	Definitions.	2
4280.104	Exception authority.	9
4280.105	Appeals.	9
4280.106	Conflict of interest.	9
4280.107	Applicant eligibility.	10
4280.108	Project eligibility.	11
<b>Section A. Grants</b>		
4280.109	Qualification for simplified applications.	12
	(a) Simplified application criteria.	12
	(b) Application processing and administration.	12
4280.110	Grant funding.	14
4280.111	Application and documentation.	16
	(a) General.	16
	(b) Grant application content.	16
4280.112	Evaluation of grant applications.	26
	(a) General review.	26
	(b) Ineligible applications.	26
	(c) Incomplete applications.	26
	(d) Technical merit.	26
	(e) Evaluation criteria.	26
4280.113	Insurance requirements.	32

<u>Sec.</u>		<u>Page</u>
4280.114	Laws that contain other compliance requirements.	32
	(a) Equal employment opportunity.	32
	(b) Equal opportunity and nondiscrimination.	32
	(c) Civil rights compliance.	32
	(d) Environmental analysis.	33
	(e) Executive Order 12898.	33
	(f) Uniform federal assistance regulations.	33
4280.115	Construction planning and performing development.	33
	(a) Technical services.	34
	(b) Design policies.	34
	(c) Owners accomplishing work.	34
	(d) Equipment purchases.	34
	(e) Simple contract method.	34
	(f) Design/build contracts.	37
	(g) Contract method.	40
4280.116	Grantee requirements.	42
4280.117	Servicing grants.	42
4280.118	- 4280.120 [Reserved]	42
<b>Section B. Guaranteed Loans</b>		
4280.121	Borrower eligibility.	42
4280.122	Project eligibility.	42
4280.123	Guaranteed loan funding.	42
4280.124	Interest rates.	44
4280.125	Terms of loan.	44
4280.126	Guarantee/annual renewal fee percentages.	45
4280.127	[Reserved]	46
4280.128	Application and documentation.	46
	(a) General.	46
	(b) Application content for guaranteed loans greater than \$600,000	46
	(c) Application content for guaranteed loans of \$600,000 or less.	50

<u>Sec.</u>		<u>Page</u>
4280.129	Evaluation of guaranteed loan applications.	51
	(a) General review.	51
	(b) Ineligible applications.	52
	(c) Incomplete applications.	52
	(d) Technical merit determination.	52
	(e) Evaluation criteria.	52
4280.130	Eligible lenders.	52
4280.131	Lender's functions and responsibilities.	52
	(a) General.	53
	(b) Credit evaluation.	53
	(c) Environmental information.	53
	(d) Construction planning and performing development.	53
	(e) Loan closing.	53
4280.132	Access to records.	53
4280.133	Conditions of guarantee.	53
4280.134	Sale or assignment of guaranteed loan.	53
4280.135	Participation.	53
4280.136	Minimum retention.	54
4280.137	Repurchase from holder.	54
4280.138	Replacement of document.	54
4280.139	Credit quality.	54
	(a) Cashflow.	54
	(b) Collateral.	54
	(c) Industry.	54
	(d) Equity.	55
	(e) Lien priorities.	55
4280.140	Financial statements.	55
4280.141	Appraisals.	56
	(a) Conduct of appraisals.	56
	(b) Specialized appraisers.	56
4280.142	Personal and corporate guarantees.	56
4280.143	Loan approval and obligation of funds.	56

<u>Sec.</u>		<u>Page</u>
4280.144	Transfer of lenders.	57
4280.145	Changes in borrower.	58
4280.146	Conditions precedent to issuance of Loan Note Guarantee.	58
4280.147	Issuance of the guarantee.	58
4280.148	Refusal to execute Loan Note Guarantee.	59
4280.149	Requirements after project construction.	59
	(a) Renewable energy projects.	59
	(b) Energy efficiency improvement projects.	60
4280.150	Insurance requirements.	60
4280.151	Laws that contain other compliance requirements.	60
4280.152	Servicing guaranteed loans.	60
	(a) Routine servicing.	60
	(b) Interest rate adjustment.	60
	(c) Release of collateral.	60
	(d) Subordination of lien position.	61
	(e) Alterations of loan instruments.	61
	(f) Loan transfer and assumption.	61
4280.153	Substitution of lender.	62
4280.154	Default by borrower.	62
4280.155	Protective advances.	62
4280.156	Liquidation.	63
4280.157	Determination of loss and payment.	63
4280.158	Future recovery.	63
4280.159	Bankruptcy.	63
4280.160	Termination of guarantee.	63
<b>Section C. Direct Loans</b>		
4280.161	Direct loan process.	63
4280.162	- 4280.192 [Reserved]	63

<u>Sec.</u>		<u>Page</u>
<b>Section D. Combined Funding</b>		
4280.193	Combined funding.	64
	(a) Eligibility.	65
	(b) Funding.	65
	(c) Application and documentation.	65
	(d) Evaluation.	65
	(e) Interest rate and terms of loan.	65
	(f) Other provisions.	66
4280.194	- 4280.199 [Reserved]	66
4280.200	OMB control number.	66

Appendix A - Technical Reports for Projects with Total Eligible Project Costs of \$200,000 or Less

Appendix B - Technical Reports for Projects with Total Eligible Project Costs of Greater than \$200,000

Appendix C - Renewable Energy and Energy Efficiency Improvement Program - Evaluation Criteria Scoring Guideline

oOo

PART 4280 - LOANS AND GRANTS

Subpart B - Renewable Energy Systems and Energy Efficiency Improvements Program

**§ 4280.101 Purpose.**

(a) The purpose of this subpart is to provide financial assistance to agricultural producers and rural small businesses for the purpose of purchasing and installing renewable energy systems and energy efficiency improvements in rural areas. Financial assistance to any single entity may be provided as a direct loan, guaranteed loan or grant, or a combination of a loan and grant. This subpart contains the procedures and requirements for providing such financial assistance.

(b) The Agency will allocate funds between the direct, guaranteed, and grant programs each year, including any other terms such as the transfer of funds between these allocations.

**§ 4280.102 General.**

(a) Sections 4280.103 through 4280.106 discuss definitions, exception authority, appeals, and conflict of interest, which are applicable to all of the funding programs under this subpart.

(b) Eligibility is discussed in terms of both applicants and projects. Section 4280.107 contains the eligibility requirements for applicants and § 4280.108 contains the eligibility requirements for projects.

(c) Section A, §§ 4280.109 through 4280.117, discusses grants. Section 4280.109 discusses the circumstances under which an applicant may qualify to submit a simplified application for a grant. Sections 4280.110 through 4280.114 address grant funding, grant application procedures, required documentation, the evaluation process, and post-grant Federal requirements for both the simplified and full application processes. Sections 4280.115 through 4280.117 address project planning, development, and completion as related to grant servicing.

RD Instruction 4280-B  
§ 4280.102 (con.)

(d) Section B, §§ 4280.121 through 4280.160, discusses guaranteed loans. Sections 4280.121 through 4280.126 discuss procedures and requirements for making and processing loans guaranteed by the Agency. Section 4280.128 addresses the application and documentation requirements, separating the requirements for loans over \$600,000 and for loans of \$600,000 or less. Section 4280.129 addresses the evaluation of guaranteed loan applications. Sections 4280.130 through 4280.160 provide guaranteed loan origination and servicing requirements. These requirements apply to lenders, holders, and other parties involved in making, guaranteeing, holding, servicing, or liquidating such loans.

(e) Section D presents the process by which the Agency will make direct loans.

(f) Section E presents the process by which the Agency will make combined loan and grant funding available.

(g) Appendix A contains the Technical Report requirements for projects with total eligible project costs of \$200,000 or less and Appendix B contains the Technical Report requirements for projects with total eligible project costs greater than \$200,000.

§ 4280.103 Definitions.

Terms used in this subpart are defined in either § 4279.2 or in this section. If a term is defined in both § 4279.2 and this section, it will have, for purposes of this subpart only, the meaning given in this section.

Agency. The Rural Business-Cooperative Service or successor Agency assigned by the Secretary of Agriculture to administer the 9006 program. References to the National Office, Finance Office, State Office, or other Agency offices or officials should be read as prefaced by "Agency" or "Rural Development" as applicable.

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.

Anaerobic digester project. A renewable energy system that uses animal waste and other organic substrates to produce thermal or electrical energy via anaerobic digestion.

§ 4280.103 (Con.)

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

Applicant. The agricultural producer or rural small business that is seeking a grant, guaranteed loan, or direct loan, or a combination of a grant and loan, under this subpart.

Assignment guarantee agreement (Form RD 4279-6) or successor form. A signed agreement among the Agency, the lender, and the holder containing the terms and conditions of an assignment of a guaranteed portion of a loan.

Bioenergy project. A renewable energy system that produces fuel, thermal energy, or electric power from a biomass source, other than an anaerobic digester project.

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.

Borrower. Any party or parties liable for a direct or guaranteed loan made under this subpart except guarantors.

Capacity. The maximum load that an apparatus or heating unit is able to meet on a sustained basis as rated by the manufacturer.

Commercially available. A system that has a proven operating history specific to the proposed application. Such a system is based on established design, and installation procedures and practices. Professional service providers, trades, large construction equipment providers, and labor are familiar with installation procedures and practices. Proprietary and balance of system equipment and spare parts are readily available. Service is readily available to properly maintain and operate the system. An established warranty exists for parts, labor, and performance.

Conditional Commitment (Form RD 4279-3) or successor form. Agency notice to the lender that the loan guarantee is approved subject to the completion of all conditions and requirements set forth by the Agency.



Default. The condition where a borrower or grantee is not in compliance with one or more loan covenants or grant conditions as stipulated in the Letter of Conditions, Conditional Commitment, or Loan or Grant Agreement.

Delinquent loan. A loan for which a scheduled loan payment has not been received by the due date or within any grace period as stipulated in the promissory note and loan agreement.

Demonstrated financial need. The demonstration by an applicant that the applicant is unable to finance the project from its own and commercially available resources without grant assistance, or that the project proposed by the applicant cannot achieve the income and cashflows to sustain it financially over the long term without grant assistance.

Design/build method. A method of project development whereby all design, engineering, procurement, construction, and other related project activities are performed under a single contract. The prime contractor is solely responsible and accountable for successful delivery of the project to the owner.

Eligible project costs. The total project costs that are eligible to be paid with program funds.

Energy assessment. A report conducted by an experienced energy assessor, certified energy manager or professional engineer assessing energy cost and efficiency by analyzing energy bills and briefly surveying the target building, machinery, or system. The report identifies and provides a savings and cost analysis of low-cost/no-cost measures. The report will estimate the overall costs and expected energy savings from these improvements, and dollars saved per year. The report will estimate weighted-average payback period in years.\_

Energy assessor. An individual or entity that conducts an energy assessment.

Energy audit. A report conducted by a Certified Energy Manager or Professional Engineer that focuses on potential capital-intensive projects and involves detailed gathering of field data and engineering analysis. The report will provide detailed project costs and savings information with a high level of confidence sufficient for major capital investment decisions. It will estimate costs, expected energy savings from the subject improvements, and dollars saved per year. The report will estimate weighted-average payback period in years.

§ 4280.103 (Con.)

Energy auditor. An individual or entity that conducts an energy audit.

Energy efficiency improvement. Improvements to a facility, building, or process that reduces energy consumption, or reduces energy consumed per square foot.

Existing business. A business that has completed at least one full business cycle.

Fair market value of equity in real property. Fair market value of real property, as established by appraisal, less the outstanding balance of any mortgages, liens, or encumbrances.

Feasibility study. An analysis of the economic, market, technical, financial, and management feasibility of a proposed project or business.

Financial feasibility. The ability of a project or business to achieve the income, credit, and cashflows to financially sustain a project over the long term. The concept of financial feasibility includes assessments of the cost-accounting system, the availability of short-term credit for seasonal businesses, and the adequacy of raw materials and supplies.

Geothermal, direct use. A system that uses thermal energy directly from a geothermal source.

Geothermal, electric generation. A system that uses geothermal energy to produce high pressure steam for electric power production.

Holder. A person or entity, other than the lender, who owns all or part of the guaranteed portion of the loan with no servicing responsibilities. When the single note option is used and the lender assigns a part of the guaranteed note to an assignee, the assignee becomes a holder only when the Agency receives notice and the transaction is completed through the use of Form RD 4279-6.

Hydrogen project. A renewable energy system that produces hydrogen or, a renewable energy system that uses mechanical or electric power or thermal energy from a renewable resource using hydrogen as an energy transport medium.

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 entity. 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.

Interim financing. A temporary or short-term loan made with the clear intent that it will be repaid through another loan, cash, or other financing mechanism. Interim financing is frequently used to pay construction and other costs associated with a planned project, with permanent financing to be obtained after project completion.

Large solar, electric. Large solar electric systems are those for which the rated power of the system is larger than 10 kilowatts (kW). Large solar electric systems are either stand-alone (off grid) or interconnected to the grid (on grid).

Large solar, thermal. Large solar thermal systems are those for which the rated storage volume of the system is greater than 240 gallons or that have a collector area of more than 1,000 square feet.

Large wind system. A wind energy project for which the rated power of the individual wind turbine(s) is larger than 100kW.

Lender. The organization making, servicing, and collecting the loan that is guaranteed under the provisions of this subpart.

Lender's agreement (Form RD 4279-4) or successor form. Agreement between the Agency and the lender setting forth the lender's loan responsibilities.

Loan Note Guarantee (Form RD 4279-5) or successor form. Issued and executed by the Agency containing the terms and conditions of the guarantee.

Loan-to-value. The ratio of the dollar amount of a loan to the dollar value of the discounted collateral pledged as security for the loan.

Matching funds. The funds needed to pay for the portion of the eligible project costs not funded or guaranteed by the Agency through a grant, direct loan, or guaranteed loan under this program. Unless authorized by statute, matching funds cannot include grants from any Federal grant program.

Necessary capital improvement. A capital improvement required to keep an existing system in compliance with regulations or to maintain technical or operational feasibility.

§ 4280.103 (Con.)

Parity. A lien position whereby two or more lenders share a security interest of equal priority in collateral. In the event of default, each lender is affected on a pro rata basis.

Participation. The sale of interest in a loan by the lender wherein the lender retains the note, collateral securing the note, and all responsibility for loan servicing and liquidation.

Passive investor. An equity investor that does not actively participate in management and operation decisions of the business entity as evidenced by a contractual arrangement.

Post-application. The date that the Agency receives an essentially completed application. An "essentially completed" application is an application that contains all parts necessary for the Department of Agriculture (USDA) to determine applicant and project eligibility, to score the application, and to conduct the technical evaluation.

Power purchase arrangement. The terms and conditions governing the sale and transportation of electricity produced by the grantee or borrower to another party.

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

Promissory Note. Evidence of debt. A note that a borrower signs promising to pay a specific amount of money at a stated time or on demand.

Qualified consultant. A third-party entity possessing the knowledge, expertise, and experience to perform in an efficient, effective, and authoritative manner the specific task required.

Qualified party. An entity possessing the knowledge, expertise, and experience to perform a specific task.

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 system that produces or produces and delivers usable 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 according to the latest decennial census of the United States.

Simplified application. An application that conforms to the criteria and procedures specified in § 4280.109.

Small business. An entity is considered a small business in accordance with the Small Business Administration's (SBA) small business size standards by the 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, provided such utilities meet SBA's definition of small business. These entities must operate independent of direct Government control. With the exception of the entities described above, all other non-profit entities are excluded.

Small solar, electric. Small solar electric projects are those for which the rated power of the system is 10kW or smaller. 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. Small solar thermal projects are those for which the rated storage volume of the system is 240 gallons or smaller or that have a collector area of 1,000 square feet or less.

Small wind system. Wind energy system for which the rated power of the wind turbine is 100kW or smaller and with a generator hub height of 120 feet or less. A small wind system is either stand-alone or connected to the local electrical system at less than 600 volts.

Spreadsheet. A table containing data from a series of financial statements of a business over a period of time. Financial statement analysis normally contains spreadsheets for balance sheets and income statements and may include cashflow statement data and commonly used ratios. The spreadsheets enable a reviewer to easily scan the data, spot trends, and make comparisons.

## § 4280.103 (Con.)

State. Any of the 50 States, the Commonwealth of Puerto Rico, the District of Columbia, 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 project.

Used equipment. Any equipment that has been used in any previous application and is provided in an "as is" condition.

Very small business. A business with fewer than 15 employees and less than \$1 million in annual receipts.

§ 4280.104 Exception authority.

The Administrator may, on a case-by-case basis, make an exception to any requirement or provision of this subpart that is not inconsistent with any authorizing statute or applicable law, if the Administrator determines that application of the requirement or provision would adversely affect the USDA's interest.

§ 4280.105 Appeals.

Only the grantee, borrower, lender, or holder can appeal an Agency decision made under this subpart. In cases where the Agency has denied or reduced the amount of final loss payment to the lender, the adverse decision may be appealed by the lender only. An adverse decision that only impacts the holder may be appealed by the holder only. A decision by a lender adverse to the interest of the borrower is not a decision by the Agency, whether or not concurred in by the Agency. An adverse decision regarding a grant or direct loan application may be appealed by the applicant only. Appeals will be handled in accordance with 7 CFR part 11 of this title. Any party adversely affected by an Agency decision under this subpart may request a determination of appealability from the Director, National Appeals Division, USDA, within 30 days of the adverse decision.

§ 4280.106 Conflict of interest.

No conflict of interest or appearance of conflict of interest will be allowed. For purposes of this subpart, conflict of interest includes, but is not limited to, distribution or payment of grant, loan, and guaranteed loan funds or award of project contracts to an individual owner, partner, stockholder, or beneficiary of the applicant or borrower or a close relative of such an individual when such individual will retain any portion of the ownership of the applicant or borrower.

§ 4280.107 Applicant eligibility.

(a) To receive a grant or loan under this subpart, an applicant must meet each of the criteria, as applicable, as set forth in paragraphs (a)(1) through (5) of this section.

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

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

(3) 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.

(4) Applicants and owners will be ineligible to receive funds under this subpart as discussed in paragraphs (a)(4)(i) and (ii) of this section.

(i) If an applicant or 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 is not eligible to receive a grant, direct loan, or guaranteed loan until the judgment is paid in full or otherwise satisfied or the delinquency is resolved.

(ii) If an applicant has been debarred from receiving Federal assistance, the applicant is not eligible to receive a grant, direct loan, or guaranteed loan under this subpart.

§ 4280.107(a) (Con.)

(5) A grant applicant must have demonstrated financial need.

(b) An applicant that has received one or more grants and/or loans under this program must make satisfactory progress, as determined by the Agency, toward completion of any previously funded projects before it will be considered for subsequent funding.

§ 4280.108 Project eligibility.

For a renewable energy system or energy efficiency improvement project to be eligible to receive a grant or loan under this subpart, the proposed project must meet each of the criteria, as applicable, in paragraphs (a) through (g) of this section.

(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.

(c) The project must have technical merit, as determined using the procedures specified in § 4280.112(d).

(d) The project must be located in a rural area, as defined in § 4280.103.

(e) The applicant must be the owner of the project and control the revenues and expenses of the project, including operation and maintenance. A third-party under contract to the owner may be used to control revenues and expenses and manage the operation and/or maintenance of the project.

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

(g) Satisfactory sources of revenue in an amount sufficient to provide for the operation, management, maintenance, and debt service of the project must be available for the life of the project.



§ 4280.109 Qualification for simplified applications.

When applying for a grant, applicants may qualify for the simplified application process. In order to use the simplified application process, each of the conditions specified in paragraphs (a)(1) through (8) of this section must be met.

(a) Simplified application criteria.

- (1) The applicant must be eligible in accordance with § 4280.107.
- (2) The project must be eligible in accordance with § 4280.108.
- (3) Total eligible project costs must be \$200,000 or less.
- (4) The proposed project must use commercially available renewable energy systems or energy efficiency improvements.
- (5) Construction planning and performing development must be performed in compliance with § 4280.115. The applicant or the applicant's prime contractor must assume all risks and responsibilities of project development.
- (6) The applicant or the applicant's prime contractor is responsible for all interim financing.
- (7) The proposed project is scheduled to be completed within 24 months after entering into a grant agreement. The Agency may extend this period if the Agency determines, at its sole discretion, that the applicant is unable to complete the project for reasons beyond the applicant's control.
- (8) The applicant agrees not to request reimbursement from funds obligated under this program until after project completion, including all operational testing and certifications acceptable to the Agency.

(b) Application processing and administration.

- (1) Application documents. Application documents shall be submitted in accordance with § 4280.111 or, if applying for a combined grant and loan, also in accordance with § 4280.193(c).

§ 4280.109(b) (Con.)

(2) Demonstrated financial need. The applicant must certify that it meets the definition of demonstrated financial need, as defined in § 4280.103. The Agency may require the applicant to provide supplemental information that will allow the Agency to make its own determination of the applicant's financial need.

(3) Project development. Section 4280.115 applies, except as follows:

(i) Any grantee may participate in project development without direct compensation subject to the approval in writing by the prime contractor, provided that all applicable construction practices, manufacturer instructions, and all safety codes and standards are followed during construction and testing, and the work product meets all applicable manufacture specifications, and all applicable codes and standards. The prime contractor remains responsible for all the overall successful completion of the project, including any work done by the grantee, or

(ii) A grantee who can demonstrate to the Agency that the grantee has the necessary experience and other resources to successfully complete the project may serve as the prime contractor/installer. Projects where the grantee serves as the prime contractor will need to secure the services of an independent, professionally responsible, qualified consultant to certify testing specifications, procedures, and testing results.

(4) Project completion. The project is complete when the applicant has provided a written final project development, testing, and performance report acceptable to the Agency. Upon notification of receipt of an acceptable project completion report, the applicant may request grant reimbursement. The Agency reserves the right to observe the testing.

(5) Insurance. Section 4280.113 applies, except business interruption insurance is not required.

§ 4280.110 Grant funding.

(a) The amount of grant funds that will be made available to an eligible project under this subpart will not exceed 25 percent of total eligible project costs. Eligible project costs are specified in paragraph (c) of this section.

(b) The applicant is responsible in securing the remainder of the total eligible project costs not covered by grant funds. The amount secured by the applicant must be the remainder of total eligible project costs.

(1) Without specific statutory authority, other Federal grant funds and applicant in-kind contributions cannot be used to meet the matching fund requirement. Third-party, in-kind contributions are limited to 10 percent of the matching fund requirement of the grant. The Agency will advise if the proposed third-party, in-kind contributions are acceptable in accordance with 7 CFR part 3015 of this title.

(2) Passive third-party equity contributions are acceptable for renewable energy system projects, including those that are eligible for Federal production tax credits, provided the applicant meets the requirements of § 4280.107.

(c) Eligible project costs are only those costs associated with the items identified in paragraphs (c)(1) through (9) of this section, as long as the items are an integral and necessary part of the renewable energy system or energy efficiency improvement.

(1) Post-application purchase and installation of equipment (new, refurbished, or remanufactured), except agricultural tillage equipment, used equipment, and vehicles.

(2) Post-application construction or improvements, except residential.

(3) Energy audits or assessments.

(4) Permit and license fees.

(5) Professional service fees, except for application preparation.

(6) Feasibility studies and Technical Reports.

§ 4280.110(c) (Con.)

(7) Business plans.

(8) Retrofitting.

(9) Construction of a new energy efficient 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 improvements are allowed.

(d) The maximum amount of grant assistance to one individual or entity will not exceed \$750,000 per Federal fiscal year. For those applicants that have not received a grant award during the previous 2 Federal fiscal years, additional points will be added to their priority score.

(e) Applications for renewable energy system grants will be accepted for a minimum grant request of \$2,500 up to a maximum of \$500,000.

(f) Applications for energy efficiency improvement grants will be accepted for a minimum grant request of \$1,500 up to a maximum of \$250,000.

(g) In determining the amount of a grant awarded, the Agency will take into consideration the following six criteria:

(1) The type of renewable energy system to be purchased;

(2) The estimated quantity of energy to be generated by the renewable energy system;

(3) The expected environmental benefits of the renewable energy system;

(4) The extent to which the renewable energy system will be replicable;

(5) The amount of energy savings expected to be derived from the activity, as demonstrated by an energy audit comparable to an energy audit under 7 U.S.C. 8105; and

(6) The estimated length of time it would take for the energy savings generated by the activity to equal the cost of the activity.

§ 4280.111 Application and documentation.

The requirements in this section apply to grant applications under this subpart.

(a) General. Separate applications must be submitted for renewable energy system and energy efficiency improvement projects. Applicants may only submit one application for each type of project per Federal fiscal year. An original and one complete copy of each application are required that follow the outline below. Each application must include a Table of Contents with clear pagination and chapter identification.

(b) Grant application content. Applications and documentation for projects using the simplified application process, as described in § 4280.109, must provide the required information organized pursuant to the Table of Contents in a chapter format presented in the order shown in paragraphs (b) (1) through (3) and (b) (5) through (7) of this section; paragraph (b) (4) of this section does not apply for projects using the simplified application process. Applications and documentation for projects not using the simplified application process must provide the required information organized pursuant to the Table of Contents in a chapter format presented in the order shown in paragraphs (b) (1) through (8) of this section.

(1) Forms, certifications, and organizational documents. Each application must contain the items identified in paragraphs (b) (1) (i) through (iii) in this section.

(i) Project specific forms.

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

(B) Form SF-424C, "Budget Information - Construction Programs." A more detailed budget breakdown is required in the Technical Report.

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

(D) Form RD 1940-20, "Request for Environmental Information."

§ 4280.111(b)(1) (Con.)

(ii) Certifications.

(A) AD-1049, "Certification Regarding Drug-Free Workplace Requirements (Grants) Alternative 1 - For Grantees Other than Individuals."

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

(C) Exhibit A-1 of RD Instruction 1940-Q, "Certification for Contracts, Grants and Loans," required by 7 CFR 3018.110 if the grant exceeds \$100,000.

(D) Form SF-LLL, "Disclosure of Lobbying Activities," must be completed if the applicant or borrower 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.

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

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

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

(H) Intergovernmental consultation comments in accordance with 7 CFR part 3015, subpart V, of this title.

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

(J) Applicants must provide certification that they meet the definition of demonstrated financial need, as defined in § 4280.103. *The Agency may request the applicant to provide sufficient information to allow the Agency to make its own determination of the applicant's financial need.*

(iii) Organizational documents. Except for sole proprietors, each applicant must submit, with the application, a copy of the legal organizational documents.

(2) Table of Contents. Include page numbers for each component of the application in the table of contents. Begin pagination immediately following the Table of Contents.

(3) Project Summary. Provide a concise summary of the project proposal and applicant information, project purpose and need, and project goals that includes the following:

(i) Title. Provide a descriptive title of the project (identified on SF 424).

(ii) Applicant eligibility. Describe how each of the applicable criteria identified in § 4280.107(a) (1) through (5) is met.

(iii) Project eligibility. Describe how each of the criteria, as applicable, in § 4280.108(a) through (g) is met. Clearly state whether the application is for the purchase of a renewable energy system or to make energy efficiency improvements. The response to § 4280.108(a) must include a brief description of the system or improvement. This description must be sufficient to provide the reader with a frame of reference when reviewing the rest of the application. Additional project description information may be needed later in the application.

(iv) Operation description. Describe the applicant's total farm/ranch/business operation and the relationship of the proposed project to the applicant's total farm/ranch/business operation. Provide a description of the ownership of the applicant, 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.

(v) Financial information for size determination. Provide financial information to allow the Agency to determine the applicant's size. All information submitted under this paragraph must be substantiated by authoritative records.

§ 4280.111(b)(3)(v) (Con.)

(A) Rural small businesses. Provide sufficient information to determine total annual receipts for and number of employees of the business and any parent, subsidiary, or affiliates at other locations. Voluntarily providing tax returns is one means of satisfying this requirement. The information provided must be sufficient for the Agency to make a determination of business size as defined by SBA.

(B) Agricultural producers. Provide the gross market value of your agricultural products, gross agricultural income, and gross nonfarm income of the applicant for the calendar year preceding the year in which you submit your application.

(4) Financial information. Financial information is required on the total operation of the agricultural producer/rural small business and its parent, subsidiary, or affiliates at other locations. All information submitted under this paragraph must be substantiated by authoritative records.

(i) Historical financial statements. Provide historical financial statements prepared in accordance with Generally Accepted Accounting Practices (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 years in the format that is generally required by commercial agriculture lenders.

(ii) Current balance sheet and income statement. Provide a current balance sheet and income statement prepared in accordance with GAAP and dated within 90 days of the application. Agricultural producers should present financial information in the format that is generally required by commercial agriculture lenders.



(iii) Pro forma financial statements. Provide pro forma balance sheet at start-up of the agricultural producer's/rural small business' business that reflects the use of the loan proceeds or grant award; and 3 additional years, indicating the necessary start-up 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.

(iv) Demonstration of Financial Need. Provide sufficient information or documentation that allows the Agency to make its own determination of the applicant's financial need.

(5) Matching funds. Submit a spreadsheet identifying sources of matching funds, amounts, and status of matching funds. The spreadsheet must also include a directory of matching funds source contact information. Attach any applications, correspondence, or other written communication between applicant and matching fund source.

(6) Self-Evaluation Score. Self-score the project using the evaluation criteria in § 4280.112(e). To justify the score, submit the total score along with appropriate calculations and attached documentation, or specific cross-references to information elsewhere in the application.

(7) Renewable Energy and Energy Efficiency Improvements Technical Report. A Technical Report must be submitted as part of the application to allow the Agency to determine the overall technical merit of the renewable energy system or energy efficiency improvement project.

(i) Simplified applications. Simplified applications, which are submitted for renewable energy projects or energy efficiency improvement projects with total eligible project costs of \$200,000 or less, must include a Technical Report prepared in accordance with the requirements specified in paragraphs (b)(7)(i)(A) through (C) of this section.

§ 4280.111(b)(7)(i) (Con.)

(A) The Technical Report must be prepared in accordance with Appendix A of this subpart. If a renewable energy project does not fit one of the technologies identified in Appendix A, the applicant must submit a Technical Report in accordance with paragraph (b)(7)(ii) of this section. The information in all Technical Reports must be of sufficient detail to allow the Agency to score the project and evaluate its technical feasibility.

(B) Either an energy assessment or an energy audit is required for energy efficiency improvement projects. For energy efficiency improvement projects with total eligible project costs greater than \$50,000, an energy audit must be conducted; it must be conducted by or reviewed and certified by an energy auditor. For energy efficiency improvement projects with total eligible project costs of \$50,000 or less, an energy assessment or an energy audit may be conducted by either an energy assessor or an energy auditor.

(C) Technical Reports prepared prior to the applicant's selection of a prime contractor may be modified after selection, pursuant to input from the prime contractor, and submitted to the Agency, provided the overall scope of the project is not materially changed as determined by the Agency. Changes in the report must be accompanied by an updated Form RD 1940-20.

(ii) Full applications. Full applications, which must be submitted for applications for renewable energy projects or energy efficiency improvement projects with total eligible project costs greater than \$200,000, must include a full Technical Report prepared in accordance with Appendix B of this subpart and with paragraphs (b)(7)(ii)(A) through (G) of this section, as applicable.

(A) The Technical Report must demonstrate that the renewable energy system or energy efficiency improvement project can be installed and perform as intended in a reliable, safe, cost-effective, and legally compliant manner.

(B) Either an energy assessment or an energy audit is required for energy efficiency improvement projects. For energy efficiency improvement projects with total eligible project costs greater than \$50,000, an energy audit must be conducted; it must be conducted by or reviewed and certified by an energy auditor. For energy efficiency improvement projects with total eligible project costs of \$50,000 or less, an energy assessment or an energy audit may be conducted by either an energy assessor or an energy auditor.

(C) For renewable energy projects with total eligible project costs greater than \$400,000 and for energy efficiency improvement projects with total eligible project costs greater than \$200,000, the design review, installation monitoring, testing prior to commercial operation, and project completion certification will require the services of a licensed professional engineer (PE) or team of licensed PEs.

(D) For projects with total eligible project costs greater than \$1,200,000, the Technical Report must be reviewed and include an opinion and recommendation by an independent qualified consultant.

(E) Technical Reports prepared prior to the applicant's selection of a final design, equipment vendor, or prime contractor, or other significant decision may be modified and resubmitted to the Agency, provided the overall scope of the project is not materially changed as determined by the Agency. Changes in the Technical Report must be accompanied by an updated Form RD 1940-20.

(F) All information provided in the Technical Report will be evaluated against the requirements provided in Appendix B of this subpart. Any Technical Report not prepared in the following format and in accordance with Appendix B, where applicable, will be penalized under scoring for technical merit. Technical merit is scored under § 4280.112(e)(4). Use the Evaluation Criteria Scoring Guideline in Appendix C to facilitate scoring applications.

§ 4280.111(b)(7)(ii) (Con.)

(G) All Technical Reports shall follow the outline presented below and shall contain the information described in paragraphs (b)(7)(ii)(G)(1) through (10) of this section and Appendix B, if the technology is identified in Appendix B for the particular project. If none of the Technical Reports in Appendix B apply to the proposed technology, the applicant may submit a Technical Report that conforms to the overall outline and subjects specified in paragraph (b)(7)(ii)(G) of this section. For Technical Reports prepared for technologies not identified in Appendix B, the Agency will review the reports and notify, in writing, the applicant of the changes to the report required in order for the Agency to accept the report.

(1) Qualifications of the project team. Describe the project team, their professional credentials, and relevant experience. The description must support that the project team service, equipment, and installation providers have the necessary professional credentials, licenses, certifications, or relevant experience to develop the proposed project.

(2) Agreements and permits. Describe the necessary agreements and permits required for the project and the anticipated schedule for securing those agreements and permits. For example, interconnection agreements and purchase power arrangements are necessary for all renewable energy projects electrically interconnected to the utility grid. The applicant must demonstrate that the applicant is familiar with the regulations and utility policies and that these arrangements will be secured in a reasonable timeframe.

(3) Energy or resource assessment. Describe the quality and availability of the renewable resource, and an assessment of expected energy savings through the deployment of the proposed system or increased production created by the system.

(4) Design and engineering. Describe the intended purpose of the project and the design, engineering, testing, and monitoring needed for the proposed project. The description must support that the system will be designed, engineered, tested, and monitored so as to meet its intended purpose, ensure public safety, and comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, the applicant must identify all the major equipment that is proprietary equipment and justify how this unique equipment is needed to meet the requirements of the proposed design.

(5) Project development. Describe the overall project development method, including the key project development activities and the proposed schedule for each activity. The description must identify each significant historical and projected activity, its beginning and end, and its relationship to the time needed to initiate and carry the activity through to successful project completion. The description must address applicant project development cashflow requirements. Details for equipment procurement and installation shall be addressed in paragraphs (b) (7) (ii) (G) (7) and (8) of this section.

(6) Project economic assessment. Describe the financial performance of the proposed project. The description must address project costs, energy savings, and revenues, including applicable investment and production incentives. Cost centers include, but are not limited to, administrative and general, fuel supply, operations and maintenance, product delivery and debt service. Revenues to be considered must accrue from the sale of energy, offset or savings in energy costs, byproducts, and green tags. Incentives to be considered must accrue from government entities.

(7) Equipment procurement. Describe the availability of the equipment required by the system. The description must support that the required equipment is available and can be procured and delivered within the proposed project development schedule.

§ 4280.111(b)(7)(ii)(G) (Con.)

(8) Equipment installation. Describe the plan for site development and system installation, including any special equipment requirements. In all cases, the system or improvement must be installed in conformance with manufacturer's specifications and design requirements, and comply with applicable laws, regulations, agreements, permits, codes, and standards.

(9) Operations and maintenance. Describe the operations and maintenance requirements of the system, including major rebuilds and component replacements necessary for the system to operate as designed over the design life. All systems or improvements must have a warranty. The warranty must cover and provide protection against both breakdown and a degradation of performance. The performance of the renewable energy system or energy efficiency improvement must be monitored and recorded as appropriate to the specific technology.

(10) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. The budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes must also be described.

(8) Business-level feasibility study for renewable energy systems. For each application for a renewable energy system project, with total eligible project costs greater than \$200,000, a business-level feasibility study by an independent, qualified consultant will be required by the Agency for start-up businesses or existing businesses. An acceptable business-level feasibility study must at least include an evaluation of economic, market, technical, financial, and management feasibility.

§ 4280.112 Evaluation of grant applications.

(a) General review. The Agency will evaluate each application and make a determination as to 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 applications. If either the applicant or the project is ineligible, the Agency will inform the applicant in writing of the decision, reasons therefore, and any appeal rights. No further evaluation of the application will occur.

(c) Incomplete applications. If the application is incomplete, the Agency will return it to the applicant to provide the applicant the opportunity to resubmit the application. The Agency will identify those parts of the application that are incomplete. Upon receipt of a complete application, the Agency will complete its evaluation of the application.

(d) Technical merit. The Agency's determination of a project's technical merit will be based on the information provided by the applicant. The Agency may engage the services of other government agencies or other recognized industry experts in the applicable technology field, at its discretion, to evaluate and rate the application. The Agency may use this evaluation and rating to determine the level of technical merit of the proposed project. Projects that the Agency determines are without technical merit shall be deemed ineligible.

(e) Evaluation criteria. Agency personnel will score and fund each application based on the evaluation criteria specified in paragraphs (e)(1) through (9) of this section.

(1) Quantity of energy replaced, produced, or saved. Points may only be awarded for energy replacement, energy savings, or energy generation. Points will not be awarded for more than one category.

§ 4280.112(e)(1) (Con.)

(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 zero, 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. Energy replacement is to 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 during the previous year by the applicable energy application. The estimated quantities of energy must be converted to either British thermal units (BTUs), Watts, or similar energy equivalents to facilitate scoring. If the estimated energy produced equals more than 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 from 20 percent up to, but not including 30 percent, 5 points will be awarded; 30 percent up to, but not including 35 percent, 10 points will be awarded; or, 35 percent or greater, 15 points will be awarded. Energy savings will be determined by the projections in an energy assessment or audit. Projects with total eligible project costs of \$50,000 or less 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. If the purpose of the proposed system contributes to the environmental goals and objectives of other Federal, State, or local programs, 10 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. The Technical Merit of each project will be determined using the procedures specified in paragraphs (e)(4)(i) and (ii) of this section. The procedures specified in paragraph (e)(4)(i) will be used to score paragraphs (e)(4)(i)(A) through (J) of this section. The final score awarded will be calculated using the procedures described in paragraph (e)(4)(ii) of this section.

(i) Technical merit. Each subparagraph has its own maximum possible score and will be scored according to the following criteria: If the description in the subparagraph 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 total possible score will be awarded for the subparagraph. If the description meets the basic requirements of the subparagraph, 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 total possible score will be awarded. If the description has serious deficiencies, internal inconsistencies, or is missing information, 20 percent of the total possible score will be awarded. If the description has no merit in this area, 0 percent of the total possible score will be awarded. The total possible points for Technical Merit is 35 points.

§ 4280.112(e)(4)(i) (Con.)

(A) Qualifications of the project team (maximum score of 10 points). The applicant has described the project team service providers, their professional credentials, and relevant experience. The description supports that the project team service, equipment, and installation providers have the necessary professional credentials, licenses, certifications, or relevant experience to develop the proposed project.

(B) Agreements and permits (maximum score of 5 points). The applicant has described the necessary agreements and permits required for the project and the schedule for securing those agreements and permits.

(C) Energy or resource assessment (maximum score of 10 points). The applicant has described the quality and availability of a suitable renewable resource or an assessment of expected energy savings for the proposed system.

(D) Design and engineering (maximum score of 30 points). The applicant has described the design, engineering, and testing needed for the proposed project. The description supports that the system will be designed, engineered, and tested so as to meet its intended purpose, ensure public safety, and comply with applicable laws, regulations, agreements, permits, codes, and standards.

(E) Project development schedule (maximum score of 5 points). The applicant has described the development method, including the key project development activities and the proposed schedule for each activity. The description identifies each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through to successful completion. The description addresses grantee or borrower project development cashflow requirements.

(F) Project economic assessment (maximum score of 20 points). The applicant has described the financial performance of the proposed project, including the calculation of simple payback. The description addresses project costs and revenues, such as applicable investment and production incentives, and other information to allow the assessment of the project's cost effectiveness.

(G) Equipment procurement (maximum score of 5 points). The applicant has described the availability of the equipment required by the system. The description supports that the required equipment is available, and can be procured and delivered within the proposed project development schedule.

(H) Equipment installation (maximum score of 5 points). The applicant has described the plan for site development and system installation.

(I) Operation and maintenance (maximum score of 5 points). The applicant has described the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life.

(J) Dismantling and disposal of project components (maximum score of 5 points). The applicant has described the requirements for dismantling and disposing of project components at the end of their useful life and associated wastes.

(ii) Calculation of Technical Merit Score. To determine the actual points awarded a project for Technical Merit, the following procedure will be used: The score awarded for paragraphs (e)(4)(i)(A) through (J) of this section will be added together and then divided by 100, the maximum possible score, to achieve a percentage. This percentage will then be multiplied by the total possible points of 35 to achieve the points awarded for the proposed project for Technical Merit.

§ 4280.112(e) (Con)

(5) Readiness. If the applicant has written commitments from the source(s) confirming commitment of 50 percent up to but not including 75 percent of the matching funds prior to the Agency receiving the complete application, 5 points will be awarded. If the applicant has written commitments from the source(s) confirming commitment of 75 percent up to but not including 100 percent of the matching funds prior to the Agency receiving the complete application, 10 points will be awarded. If the applicant has written commitments from the source(s) of matching funds confirming commitment of 100 percent of the matching funds prior to the Agency receiving the complete application, 15 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 \$600,000 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 \$200,000 in the preceding year or is a very small business, as defined in § 4280.103, 10 points will be awarded.

(7) Simplified application/low cost projects. If the applicant is eligible for and uses the simplified application process or the project has total eligible project costs of \$200,000 or less, 5 points will be awarded.

(8) Previous grantees and borrowers. If an applicant has not been awarded a grant or loan under this program within the 2 previous Federal fiscal years, 5 points will be awarded.

(9) Return on investment. If the proposed project will return the cost of the investment in less than 4 years, 10 points will be awarded; 4 years up to but not including 8 years, 4 points will be awarded; or 8 years up to 11 years, 2 point will be awarded.

§ 4280.113 Insurance requirements.

Agency approved insurance coverage must be maintained for the life of the grant unless this requirement is waived or modified by the Agency in writing.

(a) National flood insurance is required in accordance with 7 CFR part 1806, subpart B, of this title, if applicable.

(b) Business interruption insurance is required except for projects with total eligible project costs of \$200,000 or less.

§ 4280.114 Laws that contain other compliance requirements.

(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 is responsible for ensuring that the contractor complies with these requirements.

(b) Equal opportunity and nondiscrimination. The Agency will ensure that equal opportunity and nondiscriminatory requirements are met in accordance with the Equal Credit Opportunity Act and 7 CFR 15d, Nondiscrimination in Programs and Activities, conducted by USDA. The Agency will not discriminate against applicants on the basis of race, color, religion, national origin, sex, marital status, or age (provided that the applicant has the capacity to contract); to the fact that all or part of the applicant's income derives from public assistance program; or to the fact that the applicant has in good faith exercised any right under the Consumer Credit Protection Act.

(c) Civil rights compliance. Recipients of grants must comply with the Americans with Disabilities Act of 1990, 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 of the recipient's membership/ownership and employees. These data must be available to conduct compliance reviews in accordance with 7 CFR part 1901, subpart E, § 1901.204 of this title. Initial reviews will be conducted after Form RD 400-4 is signed and all subsequent reviews every 3 years thereafter for loans. The last review shall occur 3 years after the date of loan closing. Grants will require one subsequent compliance review after the last disbursement of grant funds have been made, and the facility has been in full operation for 90 days.

## § 4280.114 (Con.)

(d) Environmental analysis. Subpart G of part 1940 of this title outlines environmental procedures and requirements for this subpart. Prospective applicants are advised to contact the Agency to determine environmental requirements as soon as practicable after they decide to pursue any form of financial assistance directly or indirectly available through the Agency.

(1) Any required environmental review must be completed by the Agency prior to the Agency obligating any funds.

(2) The applicant will be notified of all specific compliance requirements, including, but not limited to, the publication of public notices, and consultation with State Historic Preservation Offices and the U.S. Fish and Wildlife Service.

(3) A site visit by the Agency may be scheduled, if necessary, to determine the scope of the review.

(4) The applicant taking 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.

(e) Executive Order 12898. When a project is proposed and financial assistance requested, the Agency will conduct a Civil Rights Impact Analysis (CRIA) with regards to environmental justice. The CRIA must be conducted and the analysis documented utilizing Form RD 2006-38, "Civil Rights Impact Analysis Certification." This certification must be done prior to loan approval, obligation of funds, or other commitments of Agency resources, including issuance of a Letter of Conditions or Form RD 4279-3 of guarantee, whichever occurs first.

(f) Uniform federal assistance regulations. Grants will be administered in accordance with 7 CFR part 3015 of this title.

§ 4280.115 Construction planning and performing development.

The requirements of this section apply for planning, designing, bidding, contracting, and constructing renewable energy systems and energy efficiency improvement projects as applicable. For contracts of \$200,000 or less, the simple contract method, as specified in paragraph (e) of this section, may be used. Contracts greater than \$200,000 shall use the contract method specified in paragraph (g) of this section.

(a) Technical services. Applicants are responsible for providing the engineering, architectural, and environmental services necessary for planning, designing, bidding, contracting, inspecting, and constructing their facilities. Services may be provided by the applicant's "in-house" engineer or architect or through contract, subject to Agency concurrence. Engineers and architects must be licensed in the State where the facility is to be constructed.

(b) Design policies. Facilities funded by the Agency will meet the requirements of 7 CFR subpart C of part 1780, § 1780.57(b), (c), (d), and (o) of this title. Final plans and specifications must be reviewed by the Agency and approved prior to the start of construction.

(c) Owners accomplishing work. In some instances, owners may wish to perform a part of the work themselves. For an owner to perform project development work, the owner must meet the experience requirements of 7 CFR subpart C of part 1780, § 1780.67 of this title. For an owner to provide a portion of the work, with the remainder to be completed by a contractor, a clear understanding of the division of work must be established and delineated in the contract. In such cases, the contractor will be required to inspect the owner's work and accept it. Owners are not eligible for payment for their own work as it is not an eligible project cost. See § 4280.110(c) of this subpart for further details on eligible project costs.

(d) Equipment purchases. Equipment purchases of less than \$200,000 will not require a performance and payment bond, unless required by the applicant, as long as the contract purchase is a lump sum payment and the manufacturer provides the required warranties on the equipment as outlined in paragraph (i) in the applicable section found in Appendices A and B of this subpart. Payment shall be certified by copies of the Manufacturer's paid invoices and warranty documents.

(e) Simple contract method. The simple contract method may be used for small projects with a contract not greater than \$200,000. In smaller projects, Agency funds will typically be used to reimburse project costs upon completion of the work as a lump sum payment. Partial payments will be made in accordance with Form RD 4280-2, "Grant Agreement," and Form RD 1924-6, "Construction Contract," or other Agency approved contract. All construction work will be performed under a written contract, as described below. A design/build method, where the same person or entity provides design and engineering work, as well as construction or installation, may be used under this method.

§ 4280.115(e) (Con.)

- (1) Contracting requirements threshold. For contracts above \$100,000, certain Federal requirements, including surety, must be met. An attachment to the contract may be used to incorporate language for these requirements.
- (2) Forms used. Form RD 1924-6 or other Agency approved contract must be used. Other contracts must be approved by the Agency and may be used only if they are customarily used in the area and protect the interest of the applicant and the Government with respect to compliance with items such as the drawings, specifications, payments for work, inspections, completion, nondiscrimination in construction work and acceptance of the work. The Agency will not become a party to a construction contract or incur any liability under it. No contract shall become effective until concurred in writing by the Agency. Such concurrence statement shall be attached to and made a part of the contract.
- (3) Contract provisions. Contracts will have a listing of attachments and the minimum provisions of the contract will include:
  - (i) The contract sum;
  - (ii) The dates for starting and completing the work;
  - (iii) The amount of liquidated damages to be charged;
  - (iv) The amount, method, and frequency of payment;
  - (v) Whether or not surety bonds will be provided. If not, a latent defects bond may be required, as described in paragraph (e)(4) of this section;
  - (vi) The requirement that changes or additions must have prior written approval of the Agency; and
  - (vii) The warranty period to be provided in accordance with Appendices A and B, sections 1 through 10, paragraph (i)(1).



(4) Surety. Surety per 7 CFR subpart C of part 1780, § 1780.75(c) of this title will be required, and made a part of the contract, if the applicant requests it, or if the contractor requests partial payments for construction work. If the contractor will receive a lump sum payment at the end of work, the Agency will not require surety. In such cases where no surety is provided and the project involves pre-commercial technology, first of its type in the U.S., or new designs without sufficient operating hours to prove their merit, a latent defects bond may be required to cover the work.

(5) Equal opportunity. Section 1901.205 of subpart E of part 1901 of this title applies to all financial assistance involving construction contracts and subcontracts in excess of \$10,000. Language for this requirement is included in Form RD 1924-6. If this form is not used, such language must be made a part of the Agency approved contract.

(6) Obtaining bids and selecting a contractor.

(i) The applicant may select a contractor and negotiate a contract or contact several contractors and request each to submit a bid. The applicant will provide a statement to the Agency describing the process for obtaining the bid(s) and what alternatives were considered.

(ii) When a price has already been negotiated by an applicant and a contractor, the Agency will review the proposed contract. If the contractor is qualified to perform the development and provide a warranty of the work and the price compares favorably with the cost of similar construction in the area, further negotiation is unnecessary. If the Agency determines the price is too high or otherwise unreasonable, the applicant will be required to negotiate further with the contractor. If a reasonable price cannot be negotiated or if the contractor is not qualified, the applicant will be required to negotiate with another contractor.

(iii) When an applicant has proposed development with no contractor in mind, competition will be required. The applicant must obtain bids from as many qualified contractors, dealers, or trades people as feasible depending on the method and type of construction.

§ 4280.115(e)(6) (Con.)

(iv) If the award of the contract is by competitive bidding, Form RD 1924-5, "Invitation for Bid (Construction Contract)," or another similar Agency approved invitation bid form containing the requirements of subpart E of part 1901 of this title may be used. All contractors from whom bids are requested should be informed of all conditions of the contract, including the time and place of opening bids. Conditions shall not be established which would give preference to a specific bidder or type of bidder. When applicable, copies of Forms RD 1924-6 and RD 400-6, "Compliance Statement," also should be provided to the prospective bidders.

(7) Awarding the contract. The applicant, with the concurrence of the Agency, will consider the amount of the bids or proposals, and all conditions listed in the invitation. On the basis of these considerations, the applicant will select and notify the lowest responsible bidder. The contract will be awarded using Form RD 1924-6 or similar Agency approved document as described in this section.

(8) Final payments. Prior to making final payment on the contract when a surety bond is not used, the Agency will be provided with Form RD 1924-9, "Certificate of Contractor's Release," and Form RD 1924-10, "Release by Claimants," executed by all persons who furnished materials or labor in connection with the contract. The applicant should furnish the contractor with a copy of Form RD 1924-10 at the beginning of the work in order that the contractor may obtain these releases as the work progresses.

(f) Design/build contracts. The design/build method, where the same person or entity provides design and engineering work, as well as construction or installation, may be used with Agency written approval. If the design/build contract amount is \$200,000 or less, development and contracting will follow paragraph (e) of this section. If the design/build contract amount is greater than \$200,000, Agency prior concurrence must be obtained as described below, and the remaining requirements of this section apply.

(1) Concurrence information. The applicant will request Agency concurrence by providing the Agency at least the information specified in paragraphs (f)(1)(i) through (viii) of this section.

(i) The owner's written request to use the design/build method with a description of the proposed method.

(ii) A proposed scope of work describing in clear, concise terms the technical requirements for the contract. It should include a nontechnical statement summarizing the work to be performed by the contractor and the results expected, and a proposed construction schedule showing the sequence in which the work is to be performed.

(iii) A proposed firm-fixed-price contract for the entire project which provides that the contractor shall be responsible for any extra cost which may result from errors or omissions in the services provided under the contract, as well as compliance with all Federal, State, and local requirements effective on the contract execution date.

(iv) Where noncompetitive negotiation is proposed, an evaluation of the contractor's performance on previous similar projects in which the contractor acted in a similar capacity.

(v) A detailed listing and cost estimate of equipment and supplies not included in the construction contract but which are necessary to properly operate the facility.

(vi) Evidence that a qualified construction inspector who is independent of the contractor has or will be hired.

(vii) Preliminary plans and outline specifications. However, final plans and specifications must be completed and reviewed by the Agency prior to the start of construction.

(viii) The owner's attorney's opinion and comments regarding the legal adequacy of the proposed contract documents and evidence that the owner has the legal authority to enter into and fulfill the contract.

(2) Agency concurrence of design/build method. The Agency shall review the material submitted by the applicant. When all items are acceptable, the loan approval official will concur in the use of the design/build method for the proposal.

§ 4280.115(f) (Con.)

(3) Forms used. The American Institute of Architects (AIA) Form A191, "Standard Form of Agreement Between Owner and Design/Builder," should be used. Other Agency approved contract documents may be used provided they are customarily used in the area and protect the interest of the applicant and the Agency with respect to compliance with items such as the drawings, specifications, payments for work, inspections, completion, nondiscrimination in construction work, and acceptance of the work. The Agency will not become a party to a construction contract or incur any liability under it. No contract shall become effective until concurred in writing by the Agency. Such concurrence statement shall be attached to and made a part of the contract.

(4) Contract provisions. Contracts will have a listing of attachments and shall meet the following requirements:

- (i) The contract sum;
- (ii) The dates for starting and completing the work;
- (iii) The amount of liquidated damages, if any, to be charged;
- (iv) The amount, method, and frequency of payment;
- (v) Surety provisions that meet the requirements of 7 CFR subpart C of part 1780, § 1780.75(c) of this title;
- (vi) The requirement that changes or additions must have prior written approval of the Agency;
- (vii) The warranty period to be provided in accordance with Appendices A and B, sections 1 through 10, paragraph (i);
- (viii) Contract review and concurrence in accordance with 7 CFR subpart C of part 1780, § 1780.61(b) of this title;
- (ix) Owner's contractual responsibility in accordance with 7 CFR subpart C of part 1780, § 1780.68 of this title; and

(x) Further contract provisions concerning remedies, termination, surety, equal employment opportunity, anti-kickback, records, State energy conservation plan, change orders, Agency concurrence, retainage, and other compliance requirements must be met in accordance with 7 CFR subpart C of part 1780, § 1780.75 of this title.

(5) Obtaining bids and selecting a contractor. The applicant may select a contractor based on competitive sealed bids, competitive negotiation, or noncompetitive negotiation as described in 7 CFR subpart C of part 1780, § 1780.72(b), (c), or (d) of this title.

(g) Contract method. If the contract amount is greater than \$200,000 and is not of the design/build method, the following conditions must be met:

(1) Procurement method. Procurement method shall comply with the requirements of 7 CFR subpart C of part 1780, §§ 1780.72, 1780.75, and 1780.76 of this title.

(2) Forms used. The AIA Form A101, "Standard Form of Agreement Between Owner/Contractor," or Engineering Joint Counsel Document Committee (EJCDC) Form C-521, "Suggested Form of Agreement Between Owner and Contractor (Stipulated Price) Funding Agency Edition," should be used. Other Agency approved contract documents may be used provided they are customarily used in the area and protect the interest of the applicant and the Agency with respect to compliance with items such as the drawings, specifications, payments for work, inspections, completion, nondiscrimination in construction work, and acceptance of the work. The Agency will not become a party to a construction contract or incur any liability under it. No contract shall become effective until concurred in writing by the Agency. Such concurrence statement shall be attached to and made a part of the contract.

(3) Contract provisions. Contracts will have a listing of attachments and shall meet the requirements of 7 CFR subpart C of part 1780, § 1780.75 of this title and the following requirements:

- (i) The contract sum;
- (ii) The dates for starting and completing the work;
- (iii) The amount of liquidated damages, if any, to be charged;

§ 4280.115(g)(3) (Con.)

- (iv) The amount, method, and frequency of payment;
- (v) Surety provisions that meet the requirements of 7 CFR subpart C of part 1780, § 1780.75(c) of this title;
- (vi) The requirement that changes or additions must have prior written approval of the Agency;
- (vii) The warranty period to be provided in accordance with Appendices A and B, sections 1 through 10, paragraph (i);
- (viii) Contract review and concurrence in accordance with 7 CFR subpart C of part 1780, § 1780.61(b) of this title;
- (ix) Owner's contractual responsibility in accordance with 7 CFR subpart C of part 1780, § 1780.68 of this title; and
- (x) Further contract provisions concerning remedies, termination, surety, equal employment opportunity, anti-kickback, records, State energy conservation plan, change orders, Agency concurrence, retainage, and other compliance requirements must be met in accordance with 7 CFR subpart C of part 1780, § 1780.75 of this title.

(4) Obtaining bids and selecting a contractor. The applicant may select a contractor based on competitive sealed bids, competitive negotiation, or noncompetitive negotiation as described in 7 CFR subpart C of part 1780, § 1780.72(b), (c), or (d) of this title.

(5) Contract award. Applicants awarding contracts must comply with 7 CFR subpart C of part 1780, § 1780.70(h) of this title.

(6) Contracts awarded prior to applications. Applicants awarding contracts prior to filing an application must comply with 7 CFR subpart C of part 1780, § 1780.74 of this title.

(7) Contract administration. Contract administration must comply with 7 CFR subpart C of part 1780, § 1780.76 of this title. If another authority, such as a Federal or State Agency, is providing funding and requires oversight of inspections, change orders, and pay requests, the Agency may accept copies of their reports or forms as meeting oversight requirements of the Agency.

§ 4280.116 Grantee requirements.

(a) A Letter of Conditions will be prepared by the Agency, establishing conditions that must be understood and agreed to by the applicant before any obligation of funds can occur. The applicant must sign a "Letter of Intent to Meet Conditions" and Form RD 1940-1, "Request for Obligation of Funds," if they accept the conditions of the grant.

(b) The grantee must sign and abide by all requirements contained in Form RD 4280-2 and this subpart.

§ 4280.117 Servicing grants.

Grants will be serviced in accordance with subparts E and O of part 1951 of this title and Form RD 4280-2.

§§ 4280.118 - 4280.120 [Reserved]

§ 4280.121 Borrower eligibility.

To receive a guaranteed loan under this subpart, a borrower must meet each of the criteria, as applicable, identified in § 4280.107(a)(1) through (4).

§ 4280.122 Project eligibility.

For a project to be eligible to receive a guaranteed loan under this subpart, the project must meet each of the criteria, as applicable, in § 4280.108(a) through (g). In addition, guaranteed loan funds may be used for necessary capital improvements to an existing renewable energy system.

§ 4280.123 Guaranteed loan funding.

(a) The amount of the loan that will be made available to an eligible project under this subpart will not exceed 50 percent of total eligible project costs. Eligible project costs are specified in paragraph (e) of this section.

(b) The minimum amount of a guaranteed loan made to a borrower will be \$5,000, less any program grant amounts. The maximum amount of a guaranteed loan made to a borrower is \$10 million.

§ 4280.123 (Con.)

(c) The percentage of guarantee, up to the maximum allowed by this section, will be negotiated between the lender and the Agency. The maximum percentage of guarantee is 85 percent for loans of \$600,000 or less; 80 percent for loans greater than \$600,000 up to and including \$5 million; and 70 percent for loans greater than \$5 million up to and including \$10 million.

(d) The total amount of the loans guaranteed by the Agency under this program to one borrower, including the outstanding principal and interest balance of any existing loans guaranteed by the Agency under this program, and new loan request, must not exceed \$10 million.

(e) Eligible project costs are only those costs associated with the items identified in paragraphs (e)(1) through (11) of this section, as long as the items are an integral and necessary part of the renewable energy system or energy efficiency improvement.

(1) Post-application purchase and installation of equipment (new, refurbished, or remanufactured), except agricultural tillage equipment, used equipment, and vehicles.

(2) Post-application construction or improvements, except residential.

(3) Energy audits or assessments.

(4) Permit and license fees.

(5) Professional service fees, except for application preparation.

(6) Feasibility studies and technical reports.

(7) Business plans.

(8) Retrofitting.

(9) Construction of a new energy efficient 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 improvements are allowed.



RD Instruction 4280-B  
§ 4280.128(e) (Con.)

(10) Working capital.

(11) Land acquisition.

(f) In determining the amount of a loan awarded, the Agency will take into consideration the following six criteria:

(1) The type of renewable energy system to be purchased;

(2) The estimated quantity of energy to be generated by the renewable energy system;

(3) The expected environmental benefits of the renewable energy system;

(4) The extent to which the renewable energy system will be replicable;

(5) The amount of energy savings expected to be derived from the activity, as demonstrated by an energy audit comparable to an energy audit under 7 U.S.C. 8105; and

(6) The estimated length of time it would take for the energy savings generated by the activity to equal the cost of the activity.

§ 4280.124 Interest rates.

(a) The interest rate for the guaranteed loan will be negotiated between the lender and the applicant and may be either fixed or variable as long as it is a legal rate. The variable rate must be based on published indices, such as money market indices. In no case, however, shall the rate be more than the rate customarily charged borrowers in similar circumstances in the ordinary course of business. The interest rate charged is subject to Agency review and approval.

(b) Comply with § 4279.125(a), (b), and (d) of this chapter.

§ 4280.125 Terms of loan.

(a) The repayment term for a loan for:

(1) real estate must not exceed 30 years;

§ 4280.125(a) (Con.)

- (2) machinery and equipment must not exceed 20 years, or the useful life, including major rebuilds and component replacement, whichever is less;
  - (3) combined loans on real estate and equipment must not exceed 30 years; and
  - (4) working capital loans must not exceed 7 years.
- (b) The first installment of principal and interest will, if possible, be scheduled for payment after the project is operational and has begun to generate income.
- (c) Payment terms must comply with § 4279.126(c) of this chapter.
- (d) The maturity of a loan will be based on the use of proceeds, the useful life of the assets being financed, and the borrower's ability to repay.
- (e) All loans guaranteed through this program must be sound, with reasonably assured repayment.
- (f) Guarantees must be provided only after consideration is given to the borrower's overall credit quality and to the terms and conditions of renewable energy and energy efficiency subsidies, tax credits, and other such incentives.
- (g) A principal plus interest repayment schedule is permissible.

§ 4280.126 Guarantee/annual renewal fee percentages.

- (a) Fee ceilings. The maximum guarantee fee that may be charged is 1 percent. The maximum annual renewal fee that may be charged is 0.5 percent. The Agency will establish each year the guarantee fee and annual renewal fee and a notice will be published in the Federal Register.
- (b) Guarantee fee. The guarantee fee will be paid to the Agency by the lender and is nonrefundable. The guarantee fee may be passed on to the borrower. The guarantee fee must be paid at the time the Loan Note Guarantee is issued.

(c) Annual renewal fee. The annual renewal fee will be calculated on the unpaid principal balance as of close of business on December 31 of each year. It will be calculated by multiplying the outstanding principal balance times the percent of guarantee times the annual renewal fee. The fee will be billed to the lender in accordance with the Federal Register publication. The annual renewal fee may not be passed on to the borrower.

§ 4280.127 [Reserved]

§ 4280.128 Application and documentation.

The requirements in this section apply to guaranteed loan applications under this subpart.

(a) General. Applications must be submitted in accordance with the requirements specified in § 4280.111(a).

(b) Application content for guaranteed loans greater than \$600,000. Applications and documentation for guaranteed loans greater than \$600,000 must provide the required information organized pursuant to a Table of Contents in a chapter format presented in the order shown in paragraphs (b)(1) and (2) of this section.

(1) Guaranteed loan application content.

(i) Table of Contents. Include page numbers for each component of the application in the table of contents. Begin pagination immediately following the Table of Contents.

(ii) Project Summary. Provide a concise summary of the proposed project and applicant information, project purpose and need, and project goals, including the following:

(A) Title. Provide a descriptive title of the project (identified on SF 424).

(B) Borrower eligibility. Describe how each of the criteria, identified in § 4280.107(a)(1) through (4), is met.

§ 4280.128(b)(1)(ii) (Con.)

(C) Project eligibility. Describe how each of the criteria, as applicable in § 4280.108(a) through (g), is met. Clearly state whether the application is for the purchase of a renewable energy system (including making necessary capital improvements to an existing renewable energy system) or to make energy efficiency improvements. The response to § 4280.108(a) must include a brief description of the system or improvement. This description is to provide the reader with a frame of reference for reviewing the rest of application. Additional project description information will be needed later in the application.

(D) Operation description. Describe the applicant's total farm/ranch/business operation and the relationship of the proposed project to the applicant's total farm/ranch/business operation as specified in § 4280.111(b)(3)(iv).

(iii) Financial information for size determination. Provide financial information to allow the Agency to determine the applicant's size as specified in § 4280.111(b)(3)(v).

(iv) Matching funds. Submit a spreadsheet identifying sources, amounts, and status of matching funds as specified in § 4280.111(b)(5).

(v) Self-evaluation score. Self-score the project using the evaluation criteria in § 4280.112(e) as specified in § 4280.111(b)(6).

(vi) Renewable energy and energy efficiency technical report. For both renewable energy projects and energy efficiency improvement projects, submit a Technical Report in accordance with applicable provisions of Appendix B of this subpart and as specified in § 4280.111(b)(7)(ii). For loan requests in excess of \$600,000, the services of a licensed professional engineer (P.E.) or a team of licensed P.E.'s is required. If none of the Technology Reports in Appendix B apply to the proposed technology, the applicant may submit a Technical Report that conforms to the overall outline and subjects specified in applicable provisions of § 4280.111(b)(7)(ii)(A) through (G).

(vii) Business-level feasibility study for renewable energy systems. For each application for a renewable energy system project submitted by a start-up or existing business, a business-level feasibility study by an independent qualified consultant will be required by the Agency. An acceptable business-level feasibility study must at least include an evaluation of economic, market, technical, financial, and management feasibility.

(2) Lender forms, certifications, and agreements. Each application submitted under paragraph (b)(1) of this section must contain applicable items described in paragraphs (b)(2)(i) through (xii) of this section.

(i) A completed Form RD 4279-1, "Application for Loan Guarantee."

(ii) Form RD 1940-20.

(iii) A personal credit report from an Agency approved credit reporting company for each owner, partner, officer, director, key employee, and stockholder owning 20 percent or more interest in the borrower's business, except passive investors and those corporations listed on a major stock exchange.

(iv) Appraisals completed in accordance with § 4280.141. Completed appraisals should be submitted when the application is filed. If the appraisal has not been completed when the application is filed, the applicant must submit an estimated appraisal. In all cases, a completed appraisal must be submitted prior to the loan being closed.

(v) Commercial credit reports obtained by the lender on the borrower and any parent, affiliate, and subsidiary firms.

(vi) Current personal and corporate financial statements of any guarantors.

(vii) Intergovernmental consultation comments in accordance with 7 CFR part 3015, subpart V, of this title.

§ 4280.128(b)(2) (Con.)

(viii) Financial statements as specified in § 4280.111(b)(4)(i) through (iii) Financial information is required on the total operation of the agricultural producer/rural small business and its parent, subsidiary, or affiliates at other locations. All information submitted under this paragraph must be substantiated by authoritative records.

(ix) Business-level feasibility study.

(x) Lender's complete comprehensive written analysis in accordance with § 4280.139.

(xi) A certification by the lender that it has completed a comprehensive written analysis of the proposal, the borrower is eligible, the loan is for authorized purposes with technical merit, and there is reasonable assurance of repayment ability based on the borrower's history, projections, equity, and the collateral to be obtained.

(xii) A proposed Loan Agreement or a sample Loan Agreement with an attached list of the proposed Loan Agreement provisions. The following requirements must be addressed in the proposed or sample Loan Agreement:

(A) Prohibition against assuming liabilities or obligations of others;

(B) Restriction on dividend payments;

(C) Limitation on the purchase or sale of equipment and fixed assets;

(D) Limitation on compensation of officers and owners;

(E) Minimum working capital or current ratio requirement;

(F) Maximum debt-to-net worth ratio;

(G) Restrictions concerning consolidations, mergers, or other circumstances;

(H) Limitations on selling the business without the concurrence of the lender;

(I) Repayment and amortization of the loan;

(J) List of collateral and lien priority for the loan, including a list of persons and corporations guaranteeing the loan with a schedule for providing the lender with personal and corporate financial statements. Financial statements for corporate and personal guarantors must be updated at least annually once the guarantee is provided;

(K) Type and frequency of financial statements to be required from the borrower for the duration of the loan;

(L) The addition of any requirements imposed by the Agency in Form RD 4279-3;

(M) A reserved section for any Agency environmental requirements; and

(N) A provision for the lender or the Agency to have reasonable access to the project and its performance information during its useful life or the term of the loan, whichever is longer, including the periodic inspection of the project by a representative of the lender or the Agency.

(c) Application content for guaranteed loans of \$600,000 or less. Applications and documentation for guaranteed loans \$600,000 or less must comply with paragraphs (c)(1) and (2) of this section.

(1) Application Contents. Applications and documentation for guaranteed loans \$600,000 or less must provide the required information organized pursuant to a Table of Contents in a chapter format presented in the order shown in § 4280.111(b)(2) through (8), except as specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Section 4280.111(b)(7)(i) does not apply.

(ii) Technical Reports must be submitted according to paragraph (c)(1)(ii)(A) or (B) of this section, as applicable.

## § 4280.128(c)(1)(ii) (Con.)

(A) For renewable energy projects and energy efficiency projects utilizing commercially available systems or improvements and with total eligible project costs of \$200,000 or less, submit a Technical Report as described in Appendix A of this subpart. If a renewable energy project does not fit on of the technologies identified in Appendix A, the applicant must submit a Technical Report that conforms to the overall outline and subjects specified in § 4280.111(b)(7)(ii)(G).

(B) For renewable energy projects and energy efficiency projects utilizing pre-commercial technology or with total eligible project costs greater than \$200,000, submit a Technical Report as described in Appendix B of this subpart and as specified in § 4280.111(b)(7)(ii)(G)(1) through (10), as applicable.

(iii) Business-level feasibility study for renewable energy systems. For each application for a renewable energy system project submitted by a start-up or existing business, a business-level feasibility study by an independent qualified consultant will be required by the Agency. An acceptable business-level feasibility study must at least include an evaluation of economic, market, technical, financial, and management feasibility. Renewable energy projects with total eligible project costs of \$200,000 or less are exempt from the feasibility study requirement.

(2) Lender forms, certifications, and agreements. Applications submitted under paragraph (c) of this section must use Form RD 4279-1A, "Application for Loan Guarantee, Short Form," and include the documentation contained in paragraphs (b)(2)(ii), (vii), (viii), (ix), (x), and (xii) of this section. The lender must have the documentation contained in paragraphs (b)(2)(iii), (iv), (v), (vi), and (xi) available in its files for the Agency's review.

§ 4280.129 Evaluation of guaranteed loan applications.

(a) General review. The Agency will evaluate each application to confirm that both the borrower and project are eligible, the project has technical merit, there is reasonable assurance of repayment, there is sufficient collateral and equity, and the proposed loan complies with all applicable statutes and regulations. If the Agency determines it is unable to guarantee the loan, the lender will be informed in writing. Such notification will include the reasons for denial of the guarantee.



RD Instruction 4280-B  
§ 4280.129 (Con.)

(b) Ineligible applications. If either the borrower or the project is ineligible, the Agency will inform the lender in writing of the reasons and provide any appeal rights. No further evaluation of the application will occur.

(c) Incomplete applications. If the application is incomplete, the Agency will identify those parts of the application that are incomplete and return it, with a written explanation, to the lender for possible future resubmission. Upon receipt of a complete application, the Agency will complete its evaluation.

(d) Technical merit determination. The Agency's determination of a project's technical merit will be based on the information provided by the applicant. The Agency may engage the services of other government agencies or recognized industry experts in the applicable technology field, at its discretion, to evaluate and rate the application. The Agency may use this evaluation and rating to determine the level of technical merit of the proposed project. Projects determined by the Agency to be without technical merit shall be deemed ineligible.

(e) Evaluation criteria. The Agency will score each application based on the evaluation criteria specified in § 4280.112(e) (except for the criteria specified in § 4280.112(e)(5)) and in paragraphs (e)(1) and (2) of this section. Points will be awarded for either paragraph (e)(1) or (2) of this section, but not both.

(1) If the interest rate on the loan is to be below the prime rate (as published in The Wall Street Journal) plus 1.5 percent, 5 points will be awarded.

(2) If the interest rate on the loan is to be below the prime rate (as published in The Wall Street Journal) plus 1 percent, 10 points will be awarded. *Use the Evaluation Criteria Scoring Guideline in Appendix C to facilitate scoring an application.*

§ 4280.130 Eligible lenders.

Eligible lenders are those identified in § 4279.29 of this chapter, excluding mortgage companies that are part of a bank-holding company.

§ 4280.131 Lender's functions and responsibilities.

(a) General. Lenders are responsible for implementing the guaranteed loan program under this subpart. All lenders requesting or obtaining a loan guarantee must comply with § 4279.30(a)(1)(i) through (ix) of this chapter.

(b) Credit evaluation. The lender's credit evaluation must comply with § 4279.30(b).

(c) Environmental information. Lenders must ensure that borrowers furnish all environmental information required under 7 CFR part 1940, subpart G, of this title and must comply with § 4279.30(c) of this chapter.

(d) Construction planning and performing development. The lender must comply with § 4279.156(a) and (b) of this chapter, except under paragraph § 4279.156(a) of this chapter, the lender must also ensure that all project facilities are designed utilizing accepted architectural and engineering practices that conform to the requirements of this subpart.

(e) Loan closing. The loan closing must be in compliance with § 4279.30(d) of this chapter.

§ 4280.132 Access to records.

Both the lender and borrower must permit representatives of the Agency (or other agencies of the U.S.) to inspect and make copies of any records pertaining to any Agency guaranteed loan during regular office hours of the lender or borrower or at any other time upon agreement between the lender, the borrower, and the Agency, as appropriate.

§ 4280.133 Conditions of guarantee.

All loan guarantees will be subject to § 4279.72 of this chapter.

§ 4280.134 Sale or assignment of guaranteed loan.

Any sale or assignment of the guaranteed loan must be in accordance with § 4279.75 of this chapter.

§ 4280.135 Participation.

All participation must be in accordance with § 4279.76 of this chapter.

§ 4280.136 Minimum retention.

Minimum retention must be in accordance with § 4279.77 of this chapter.

§ 4280.137 Repurchase from holder.

Any repurchase from a holder must be in accordance with § 4279.78 of this chapter.

§ 4280.138 Replacement of document.

Documents must be replaced in accordance with § 4279.84 of this chapter, except, in § 4279.84(b)(1)(v), a full statement of the circumstances of any defacement or mutilation of the Loan Note Guarantee or Assignment Guarantee Agreement would also need to be provided.

§ 4280.139 Credit quality.

The lender must determine credit quality and must address all of the elements of credit quality in a written credit analysis, including adequacy of equity, cashflow, collateral, history, management, and the current status of the industry for which credit is to be extended.

(a) Cashflow. All efforts will be made to structure debt so that the business has adequate debt coverage and the ability to accommodate expansion.

(b) Collateral. Collateral must have documented value sufficient to protect the interest of the lender and the Agency. The discounted collateral value will normally be at least equal to the loan amount. Lenders will discount collateral consistent with sound loan-to-value policy. Guaranteed loans made under this subpart shall have at least parity position with guaranteed loans made under subpart B of part 4279 of this title.

(c) Industry. The current status of the industry will be considered. Borrowers developing well established commercially available renewable energy systems with significant support infrastructure may be considered for better terms and conditions than those borrowers developing systems with limited infrastructure.

## § 4280.139 (Con.)

(d) Equity. In determining the adequacy of equity, the lender must meet the criteria specified in paragraph (d)(1) of this section for loans over \$600,000 and the criteria in paragraph (d)(2) of this section for loans of \$600,000 or less. Cash equity injection, as discussed in paragraphs (d)(1) and (2) of this section, must be in the form of cash. Federal grant funds may be counted as cash equity.

(1) For loans over \$600,000, borrowers shall demonstrate evidence of cash equity injection in the project of not less than 25 percent of eligible project costs. The fair market value of equity in real property that is to be pledged as collateral for the loan may be substituted in whole or in part to meet the cash equity requirement. However, the appraisal completed to establish the fair market value of the real property must not be more than 1 year old and must meet Agency appraisal standards.

(2) For loans of \$600,000 or less, borrowers shall demonstrate evidence of cash equity injection in the project of not less than 15 percent of eligible project costs. The fair market value of equity in real property that is to be pledged as collateral for the loan may be substituted in whole or in part to meet the cash equity requirement. However, the appraisal completed to establish the fair market value of the real property must not be more than 1 year old and must meet Agency appraisal standards.

(e) Lien priorities. The entire loan will be secured by the same security with equal lien priority for the guaranteed and unguaranteed portions of the loan. The unguaranteed portion of the loan will neither be paid first nor given any preference or priority over the guaranteed portion. A parity or junior position may be considered provided that discounted collateral values are adequate to secure the loan in accordance with paragraph (b) of this section after considering prior liens.

§ 4280.140 Financial statements.

(a) The financial information required in § 4280.111(b)(3)(v) and (b)(4) is required for the guaranteed loan program.

(b) If the proposed guaranteed loan exceeds \$3 million, the Agency may require annual audited financial statements, at its sole discretion when the Agency is concerned about the applicant's credit risk.

§ 4280.141 Appraisals.

(a) Conduct of appraisals. All appraisals must be in accordance with § 4279.144 of this chapter.

(1) For loans of \$600,000 or more, a complete self-contained appraisal must be conducted. Lenders must complete at least a Transaction Screen Questionnaire for any undeveloped sites and a Phase I environmental site assessment on existing business sites, which should be provided to the appraiser for completion of the self-contained appraisal.

(2) For loans for less than \$600,000, a complete summary appraisal may be conducted in lieu of a complete self-contained appraisal as required under paragraph (a)(1) of this section. Summary appraisals must be conducted in accordance with Uniform Standards of Professional Appraisal Practice (USPAP).

(b) Specialized appraisers. Specialized appraisers will be required to complete appraisals in accordance with paragraphs (a)(1) and (2) of this section. The Agency may approve a waiver of this requirement only if a specialized appraiser does not exist in a specific industry or hiring one would cause an undue financial burden to the borrower.

§ 4280.142 Personal and corporate guarantees.

(a) All personal and corporate guarantees must be in accordance with § 4279.149(a) of this chapter.

(b) Except for passive investors, unconditional personal and corporate guarantees for those owners with a beneficial interest greater than 20 percent of the borrower will be required where legally permissible.

§ 4280.143 Loan approval and obligation of funds.

The lender and applicant must comply with § 4279.173 of this chapter, except that either or both parties may also propose alternate conditions to the Conditional Commitment if certain conditions cannot be met.

## § 4280.143 (Con.)

*For guaranteed loans that exceed the State's delegation of authority, the State Office will be required to submit the complete application to the National Office for review and funding consideration.*

Section 9006 closed and obligated loans within the delegated authorities of the State will be randomly selected for review by the National Office. If selected for review, the State Office will provide the following information:

- a. Copy of the Project Summary, including supporting documentation, financial analysis software reports, and spreads analyzed by the State Office.*
- b. Copy of RD Form 4279-1 "Application for Loan Guarantee."*
- c. Projects that exceed \$200,000 in total eligible project costs, a copy of the project specific Technical Report, and National Renewable Energy Laboratory's (NREL) merit determination document.*
- d. Projects that exceed \$200,000 in total eligible project costs, and a copy of the project specific feasibility study will be provided.*
- e. Lenders complete comprehensive written analysis as required by 4280-B section 4280.139, including pro forma balance sheet projected for loan closing and spreads of historic and projected financial statements.*
- f. Summary pages of the appraisal report(s), including the qualifications of the appraiser and a copy of the desk or technical review by the State Review Appraiser, if applicable.*
- g. Copy of State loan committee minutes.*
- h. Business Loan Agreement executed between the Lender and Borrower.*
- i. Copy of the executed Conditional Commitment.*
- j. Copy of the Lenders Agreement.*

§ 4280.144 Transfer of lenders.

All transfers of lenders must be in accordance with § 4279.174 of this chapter, except that it will be the Agency rather than the loan approval official who may approve the substitution of a new eligible lender.

§ 4280.145 Changes in borrower.

All changes in borrowers must be in accordance with § 4279.180 of this chapter, but the eligibility requirements of this program apply.

§ 4280.146 Conditions precedent to issuance of Loan Note Guarantee.

(a) The Loan Note Guarantee will not be issued until the lender certifies to the conditions identified in paragraphs § 4279.181(a) through (o) of this chapter and paragraph (b) of this section.

(b) All planned property acquisitions and development have been performing at a steady state operating level in accordance with the technical requirements, plans, and specifications, conforms with applicable Federal, State, and local codes, and costs have not exceeded the amount approved by the lender and the Agency.

§ 4280.147 Issuance of the guarantee.

(a) When loan closing plans are established, the lender must notify the Agency in writing. At the same time, or immediately after loan closing, the lender must provide the following to the Agency:

- (1) Lender's certifications as required by § 4280.146;
- (2) An executed Form RD 4279-4; and
- (3) An executed Form RD 1980-19, "Guaranteed Loan Closing Report," and appropriate guarantee fee.

(b) When the Agency is satisfied that all conditions for the guarantee have been met, the Loan Note Guarantee and the following documents, as appropriate, will be issued:

- (1) Assignment Guarantee Agreement. If the lender assigns the guaranteed portion of the loan to a holder, the lender, holder, and the Agency must execute the Assignment Guarantee Agreement;
- (2) Certificate of Incumbency. If requested by the lender, the Agency will provide the lender with a copy of Form RD 4279-7, "Certificate of Incumbency and Signature," with the signature and title of the Agency official responsible for signing the Loan Note Guarantee, Lender's Agreement, and Assignment Guarantee Agreement;

§ 4280.147(b) (Con.)

- (3) Copies of legal loan documents; and
- (4) Disbursement plan, if working capital is a purpose of the project.

§ 4280.148 Refusal to execute Loan Note Guarantee.

If the Agency determines that it cannot execute the Loan Note Guarantee, § 4279.187 of this chapter will apply.

§ 4280.149 Requirements after project construction.

Once the project has been constructed, the lender must provide the Agency periodic reports from the borrower. The borrower's reports will include the information specified in paragraphs (a) and (b) of this section, as applicable.

(a) Renewable energy projects. For renewable energy projects, commencing the first full calendar year following the year in which project construction was completed and continuing for 3 full years, provide a report detailing the information specified in paragraphs (a)(1) through (7) of this section.

- (1) The actual amount of energy produced in BTUs, kilowatt-hours, or similar energy equivalents.
- (2) If applicable, documentation that any identified health and/or sanitation problem has been solved.
- (3) The annual income and/or energy savings of the renewable energy system.
- (4) A summary of the cost of operating and maintaining the facility.
- (5) A description of any maintenance or operational problems associated with the facility.
- (6) Recommendations for development of future similar projects.
- (7) Actual jobs created or saved.



(b) Energy efficiency improvement projects. For energy efficiency improvement projects, commencing the first full calendar year following the year in which project construction was completed and continuing for 2 full years, provide a report detailing the actual amount of energy saved due to the energy efficiency improvements.

§ 4280.150 Insurance requirements.

Each borrower must obtain the insurance required in § 4280.113. The coverage required by this section must be maintained for the life of the loan unless this requirement is waived or modified by the Agency in writing.

§ 4280.151 Laws that contain other compliance requirements.

Each lender and borrower must comply with the requirements specified in § 4280.114(d), §§ 4279.58, and 4279.156(c) and (d) of this chapter.

§ 4280.152 Servicing guaranteed loans.

The lender must service the entire loan and must remain mortgagee and secured party of record notwithstanding the fact that another party may hold a portion of the loan. The entire loan must be secured by the same security with equal lien priority for the guaranteed and unguaranteed portions of the loan. The unguaranteed portion of a loan will neither be paid first nor given any preference or priority over the guaranteed portion of the loan.

(a) Routine servicing. Comply with § 4287.107 of this chapter, except that all notifications from the lender to the Agency shall be in writing and all actions by the lender in servicing the entire loan must be consistent with the servicing actions that a reasonable, prudent lender would perform in servicing its own portfolio.

(b) Interest rate adjustments. Comply with § 4287.112 of this chapter, except that under § 4287.112(a) (3) of this chapter the interest rates, after adjustments, must comply with the requirements for interest rates on new loans as established by § 4280.124.

(c) Release of collateral.

(1) Collateral may only be released in accordance with § 4287.113(a) and (b) of this chapter and paragraph (c) (2) of this section.

## § 4280.152(c) (Con.)

(2) Within the parameters of paragraph (c)(1) of this section, lenders may, over the life of the loan, release collateral (other than personal and corporate guarantees) with a cumulative value of up to 20 percent of the original loan amount without Agency concurrence, if the proceeds generated are used to reduce the guaranteed loan or to buy replacement collateral or real estate equal to or greater than the collateral being replaced.

(d) Subordination of lien position. All subordinations of the lender's lien position must comply with § 4287.123 of this chapter.

(e) Alterations of loan instruments. All alterations of loan instruments must comply with § 4287.124 of this chapter.

(f) Loan transfer and assumption. All loan transfers and assumptions must comply with § 4287.134(c), (d), (f), (g), and (i) through (k) of this chapter in addition to the following:

(1) Documentation of request. All transfers and assumptions must be approved in writing by the Agency and must be to eligible applicants in accordance with § 4280.121. An individual credit report must be provided for transferee proprietors, partners, officers, directors, and stockholders with 20 percent or more interest in the business, along with such other documentation as the Agency may request to determine eligibility.

(2) Terms. Loan terms must not be changed unless the change is approved in writing by the Agency with the concurrence of any holder and the transferor (including guarantors), if they have not been or will not be released from liability. Any new loan terms must be within the terms authorized by § 4280.125. The lender's request for approval of new loan terms will be supported by an explanation of the reasons for the proposed change in loan terms.

(3) Additional loans. Loans to provide additional funds in connection with a transfer and assumption must be considered as a new loan application under § 4280.128.

RD Instruction 4280-B  
§ 4280.152(f) (Con.)

(4) Loss resulting from transfer. If a loss should occur upon consummation of a complete transfer and assumption for less than the full amount of the debt and the transferor (including personal guarantors) is released from liability, the lender, if it holds the guaranteed portion, may file Form RD 449-30, "Loan Note Guaranteed Loss of Report," to recover its pro rata share of the actual loss. If a holder owns any of the guaranteed portion, such portion must be repurchased by the lender or the Agency in accordance with § 4279.78(c) of this chapter. In completing the report of loss, the amount of the debt assumed will be entered as net collateral (recovery). Approved protective advances and accrued interest thereon made during the arrangement of a transfer and assumption will be included in the calculations.

§ 4280.153 Substitution of lender.

(a) All substitutions of lenders must comply with § 4287.135(a) (2) and (b) of this chapter and paragraph (b) of this section.

(b) The Agency may approve the substitution of a new lender if the proposed substitute lender:

- (1) Is an eligible lender in accordance with § 4280.130;
- (2) Is able to service the loan in accordance with the original loan documents; and
- (3) Acquires title to the unguaranteed portion of the loan held by the original lender and assumes all original loan requirements, including liabilities and servicing responsibilities.

§ 4280.154 Default by borrower.

If the loan goes into default, the lender must comply with § 4287.145 of this chapter.

§ 4280.155 Protective advances.

All protective advances made by the lender must comply with § 4287.156 of this chapter.

§ 4280.156 Liquidation.

All liquidations must comply with § 4287.157 of this chapter, except as follows:

(a) Under § 4287.157(d)(13) of this chapter, whenever \$200,000 is used substitute \$100,000; and

(b) Under § 4287.157(d)(13) of this chapter, replace the sentence "The appraisal shall consider this aspect" with "Both the estimate and the appraisal shall consider this aspect."

§ 4280.157 Determination of loss and payment.

Loss and payments will be determined in accordance with § 4287.158 of this chapter.

§ 4280.158 Future recovery.

Future recoveries will be conducted in accordance with § 4287.169 of this chapter.

§ 4280.159 Bankruptcy.

Bankruptcies will be handled in accordance with § 4287.170 of this chapter, except that the notification required under § 4287.170(b)(4) of this chapter shall be made in writing.

§ 4280.160 Termination of guarantee.

Guarantees will be terminated in accordance with § 4287.180 of this chapter.

§ 4280.161 Direct Loan Process.

(a) The Agency will determine each year whether or not direct loan funds are available. For each year in which direct loan funds are available, the Agency will publish a Notice of Funds Availability (NOFA) in the Federal Register.

RD Instruction 4280-B  
§ 4280.161 (Con.)

- (b) In each direct loan NOFA, the Agency will identify the following:
- (1) The amount of funds available for direct loans;
  - (2) Applicant and project eligibility criteria;
  - (3) Minimum and maximum loan amounts;
  - (4) Interest rates;
  - (5) Terms of loan;
  - (6) Application and documentation requirements;
  - (7) Evaluation of applications;
  - (8) Actions required of the applicant/borrower (e.g., appraisals, land and property acquisition);
  - (9) Insurance requirements;
  - (10) Laws that contain other compliance requirements;
  - (11) Construction planning and performing development;
  - (12) Requirements after project construction;
  - (13) Letter of Conditions, loan agreement, and loan closing process;
  - (14) Processing and servicing of direct loans by the Agency; and
  - (15) Any applicable definitions.

§ 4280.162 - 4280.192 [Reserved]

§ 4280.193 Combined funding.

The requirements for a project for which an applicant is seeking a combined grant and guaranteed loan are defined as follows:

## § 4280.193 (Con.)

(a) Eligibility. Applicants must meet the applicant eligibility requirements specified in § 4280.107 and the borrower eligibility requirements specified in § 4280.121. Projects must meet the project eligibility requirements specified in §§ 4280.108 and 4280.122. Applicants may submit simplified applications if the project meets the requirements specified in § 4280.109.

(b) Funding. Funding provided under this section is subject to the limits described in paragraphs (b)(1) through (3) of this section.

(1) The amount of any combined grant and guaranteed loan must not exceed 50 percent of total eligible project costs. For purposes of combined funding requests, total eligible project costs are based on the total costs associated with those items specified in §§ 4280.110(c) and 4280.123(e). The applicant must provide the remaining total funds needed to complete the project.

(2) Third-party, in-kind contributions will be limited to 10 percent of the matching fund requirement of any financial assistance provided to the applicant.

(3) The minimum combined funding request allowed is \$5,000, with the grant portion of the funding request being at least \$1,500.

(c) Application and documentation. When applying for combined funding, the applicant must submit separate applications for both types of assistance (grant and guaranteed loan). Each application must meet the requirements, including the requisite forms and certifications, specified in §§ 4280.111 and 4280.128. The separate applications must be submitted simultaneously. The applicant must submit at least one set of documentation, but does not need to submit duplicate forms or certifications.

(d) Evaluation. The Agency will evaluate each application according to applicable procedures specified in §§ 4280.112 and 4280.129.

(e) Interest rate and terms of loan. The interest rate and terms of the loan for the loan portion of the combined funding request will be determined based on the procedures specified in §§ 4280.124 and 4280.125 for guaranteed loans.

RD Instruction 4280-B  
§ 4280.193 (Con.)

(f) Other provisions. In addition to the requirements specified in paragraphs (a) through (e) of this section, the combined funding request shall be subject to the other requirements specified in this subpart, including, but not limited to, processing and servicing requirements, as applicable, as described in paragraphs (f) (1) and (2) of this section.

(1) All other provisions of Section A of this subpart shall apply to the grant portion of the combined funding request.

(2) All other provisions of Section B of this subpart shall apply to the guaranteed loan portion of the combined funding request.

§§ 4280.194 - 4280.199 [Reserved]

§ 4280.200 OMB control number.

The information collection requirements contained in the regulation have been approved by the Office of Management and Budget (OMB) and have been assigned OMB control number 0570-0050. A person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

**TECHNICAL REPORTS FOR PROJECTS WITH  
TOTAL ELIGIBLE PROJECT COSTS OF \$200,000 OR LESS**

The Technical Report for projects with total eligible project costs of \$200,000 or less 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 Sections 1 through 10 of this appendix. Supporting information may be submitted in other formats. Design drawings and process flowcharts are encouraged as exhibits. A discussion of each topic 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 report plus one copy to the Rural Development State Office. Depending on the level of engineering required for the specific project or if necessary to ensure public safety, the services of a licensed professional engineer or a team of licensed professional engineers may be required.



## Section 1. Bioenergy

The technical requirements specified in this section apply to bioenergy projects, which are, as defined in § 4280.103, renewable energy systems that produce fuel, thermal energy, or electric power from a biomass source, other than an anaerobic digester project.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. 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, indicate shipping or receiving method and required infrastructure for shipping. For proposed projects with an established resource, provide a summary of the resource.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
  - (2) List possible suppliers and models of major pieces of equipment;
  - (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
  - (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system;
  - (5) 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 of 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;
  - (6) Discuss the impact of reduced or interrupted biomass availability on the system process; and
  - (7) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.
- (e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate that the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.
- (f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

## Section 2. Anaerobic Digester Projects

The technical requirements specified in this section apply to anaerobic digester projects, which are, as defined in § 4280.103, renewable energy systems that use animal waste and other organic substrates to produce thermal or electrical energy via anaerobic digestion.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of digestible substrate resource available. Indicate the source of the data and assumptions. 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. Show the digestion conversion factors and calculations used to estimate biogas production and heat or power production.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
- (2) List possible suppliers and models of major pieces of equipment;
- (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
- (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system;
- (5) Describe the expected electric power, fuel production, or thermal energy production of the proposed system as rated and as expected in actual field conditions. Describe the uses of or the market for electricity, heat, or fuel produced by the system; and
- (6) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.

(f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

### Section 3. Geothermal, Electric Generation

The technical requirements specified in this section apply to electric generation geothermal projects, which are, as defined in § 4280.103, systems that use geothermal energy to produce high pressure steam for electric power production.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credential for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including 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.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. 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.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
  - (2) List possible suppliers and models of major pieces of equipment;
  - (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
  - (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system;
  - (5) Describe the expected electric power, fuel production, or thermal energy production of the proposed system as rated and as expected in actual field conditions. Describe the uses of or the market for electricity, heat, or fuel produced by the system; and
  - (6) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.
- (e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate that the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.
- (f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.
- (g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.



(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

#### Section 4. Geothermal, Direct Use

The technical requirements specified in this section apply to direct use geothermal projects, which are, as defined in § 4280.103, systems that use thermal energy directly from a geothermal source.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits, including 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.

(2) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. 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.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
  - (2) List possible suppliers and models of major pieces of equipment;
  - (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
  - (4) Provide one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system;
  - (5) Describe the expected thermal energy production of the proposed system as rated and as expected in actual field conditions. Describe the uses of, or the market for, heat produced by the system; and
  - (6) Describe the project site and address issues such as proximity to the load, unique safety concerns, and whether special circumstances exist.
- (e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.
- (f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.
- (g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

## Section 5. Hydrogen

The technical requirements specified in this section apply to hydrogen projects, which are, as defined in § 4280.103, renewable energy systems that produce hydrogen, or a renewable energy system that uses mechanical or electric power or thermal energy from a renewable resource using hydrogen as an energy transport medium.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the type, quantity, quality, and seasonality of the local renewable resource that will be used to produce the hydrogen.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

(1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;

(2) List possible suppliers and models of major pieces of equipment;

- (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
  - (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system; and
  - (5) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.
- (e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.
- (f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.
- (g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.
- (h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.
- (i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

## Section 6. Solar, Small

The technical requirements specified in this section apply to small solar electric projects and small solar thermal projects, as defined in § 4280.103. Small solar electric projects are those for which the rated power of the system is 10kW or smaller. 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, or which have a collector area of 1,000 square feet or less.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of solar resource available. Indicate the source of the solar data and assumptions.



(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
- (2) List possible suppliers and models of major pieces of equipment;
- (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
- (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system; and
- (5) Describe the project site and address issues such as solar access, orientation, proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate that the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.

(f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

## Section 7. Solar, Large

The technical requirements specified in this section apply to large solar electric projects and large solar thermal projects, as defined in § 4280.103.

Large solar electric systems are those for which the rated power of the system is larger than 10kW. 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 or that have a collector area of more than 1,000 square feet.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credential for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of solar resource available. Indicate the source of the solar data and assumptions.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
- (2) List possible suppliers and models of major pieces of equipment;
- (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
- (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system; and
- (5) Describe the project site and address issues such as solar access, orientation, proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.

(f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

Section 8. Wind, Small

The technical requirements specified in this section apply to small wind systems, which are, as defined in § 4280.103, wind energy systems for which the rated power of the wind turbine is 100kW or smaller and with a generator hub height of 120 feet or less. Small wind systems are either stand-alone or connected to the local electrical system at less than 600 volts.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of local wind resource where the small wind turbine is to be installed. Indicate the source of the wind data and assumptions.

(d) Design and engineering. Applicants must certify that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
  - (2) List possible suppliers and models of major pieces of equipment;
  - (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
  - (4) Provide a one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system; and
  - (5) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.
- (e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.
- (f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.
- (g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.
- (h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.



Section 9. Wind, Large.

The technical requirements specified in this section apply to large wind systems, which are, as defined in § 4280.103, wind energy projects for which the rated power of the individual wind turbine(s) is larger than 100kW.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional.

(b) Agreements, permits, and certifications.

(1) Identify all necessary agreements and permits required for the project and the status and schedule for securing those agreements and permits.

(2) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(3) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of local wind resource where the large wind turbine is to be installed. Indicate the source of the wind data and assumptions. 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.

(d) Design and engineering. Applicants must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. In addition, applicants must:

- (1) Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose;
- (2) List possible suppliers and models of major pieces of equipment;
- (3) Provide a description of the components, materials, or systems to be installed. Include the location of the project;
- (4) Provide one-line diagram for the electrical interconnection. Provide diagrams or schematics as required showing all major installed structural, mechanical, and electrical components of the system; and
- (5) Describe the project site and address issues such as proximity to the load or the electrical grid, unique safety concerns, and whether special circumstances exist.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed and be able to identify impacts of any delays on the project completion. The applicant must submit a statement certifying that the project will be completed within 3 years from the date of approval.

(f) Project economic assessment. Provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the system to operate as designed over the design life. State the design life of the system.

(1) Provide information on all system warranties. A minimum 3-year warranty for equipment and a 10-year warranty on design are expected.

(2) If the project has any unique operation and maintenance issues, describe them.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives.

Section 10. Energy Efficiency Improvements

The technical requirements specified in this section apply to energy efficiency improvement projects, which are, as defined in § 4280.103, improvements to a facility, building, or process that reduces energy consumption.

(a) Qualifications of key project service providers. List all key project service providers. If one or more licensed professionals are involved in the project, provide the credentials for each professional. For projects with total eligible project costs greater than \$50,000, also discuss the qualifications of the energy auditor, including any relevant certifications by recognized organizations or bodies.

(b) Agreements, permits, and certifications.

(1) The applicant must certify that they will comply with all necessary agreements and permits required for the project. Indicate the status and schedule for securing those agreements and permits.

(2) Identify all environmental issues, including any compliance issues associated with or expected as a result of the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(c) Energy assessment.

(1) For all energy efficiency improvement projects, provide adequate and appropriate evidence of energy savings expected when the system is operated as designed.

(2) For energy efficiency improvement projects with total eligible project costs greater than \$50,000, an energy audit must be conducted. An energy audit is a written report by an independent, qualified party 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:

(i) 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.

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

(iii) Technical analysis. Discuss the interactions among the potential improvements and other energy systems.

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

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

(C) Rank potential improvement measures by cost-effectiveness.

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

(A) Provide preliminary specifications for critical components.

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

(C) 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.

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

(E) Describe explicitly how outcomes will be measured.

(d) Design and engineering. The applicant must submit a statement certifying that their project will be designed and engineered so as to meet the intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards.

(1) Identify possible suppliers and models of major pieces of equipment.

(2) Describe the components, materials, or systems to be installed. Include the location of the project.

(e) Project development schedule. Provide a project schedule in an appropriate level of detail that will demonstrate the project can be adequately managed. The applicant must submit a statement certifying that the project will be completed within 2 years from the date of approval.

(f) Project economic assessment. For projects with total eligible project costs greater than \$50,000, provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. The project must be installed in accordance with applicable local, State, and national building and electrical codes and regulations. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules. Upon successful system installation and following established operation, the successful applicant must deliver invoices and evidence of payment.

(i) Operations and maintenance. Identify any unique operations and maintenance requirements of the project necessary for the improvement(s) to perform as designed over the design life. State the design life of the improvement(s). Provide information regarding component warranties.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and proper disposal of the project components and associated wastes at the end of their useful lives.

oOo

TECHNICAL REPORTS FOR PROJECTS WITH  
TOTAL ELIGIBLE PROJECT COSTS GREATER THAN \$200,000

The Technical Report for projects with total eligible project costs greater than \$200,000 (and for any other project that must submit a Technical Report under this appendix) 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 Sections 1 through 10 of this appendix. Supporting information may be submitted in other formats. Design drawings and process flowcharts are encouraged as exhibits. A discussion of each topic 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 report plus one copy to the Rural Development State Office. Renewable energy projects with total eligible project costs greater than \$400,000 and for energy efficiency improvement projects with total eligible project costs greater than \$200,000 require the services of a licensed professional engineer (PE) or team of PEs. Depending on the level of engineering required for the specific project or if necessary to ensure public safety, the services of a licensed PE or a team of licensed PEs may be required for smaller projects.

## Section 1. Bioenergy

The technical requirements specified in this section apply to bioenergy projects, which are, as defined in § 4280.103, renewable energy systems that produce fuel, thermal energy, or electric power from a biomass source, other than an anaerobic digester project.

(a) Qualifications of project team. The bioenergy 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 bioenergy systems development, engineering, installation, and maintenance. Authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services must be provided. Authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life must also be provided. The application must:

- (1) 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 turnkey, 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;
- (2) Discuss the bioenergy 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;
- (3) Discuss the project manager, equipment supplier, system designer, project engineer, and construction contractor qualifications for engineering, designing, and installing bioenergy systems, including any relevant certifications by recognized organizations. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available; and
- (4) Describe the system operator's qualifications and experience for servicing, operating, and maintaining bioenergy renewable energy equipment or projects. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available.



(b) Agreements, permits, and certifications. 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 (b)(1) through (8).

(1) Identify zoning and code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

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

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

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

(6) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(7) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(8) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified party. Systems must be engineered as a complete, integrated system with matched components. The engineering must be comprehensive, including site selection, system and component selections, and system monitoring equipment. Systems must be constructed by a qualified party.

(1) Provide a concise but complete description of the bioenergy 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 of 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.

(2) Describe the project site and address issues such as site access, foundations, backup equipment when applicable, and environmental concerns with emphasis on land use, air quality, water quality, soil degradation, habitat fragmentation, land use, visibility, odor, noise, construction, and installation issues. Identify any unique construction and installation issues.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. Demonstrate that equipment required by the system is available and can be procured and delivered within the proposed project development schedule. Bioenergy 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. In addition:

- (1) Provide information regarding available system and component warranties and availability of spare parts;
  - (2) 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. Discuss the costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing. Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator; and
  - (3) For systems having a biomass input capacity exceeding 10 tons of biomass per day, provide and discuss the risk management plan for handling large, potential failures of major components.
- (j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

## Section 2. Anaerobic Digester Projects

The technical requirements specified in this section apply to anaerobic digester projects, which are, as defined in § 4280.103, renewable energy systems that use animal waste and other organic substrates to produce thermal or electrical energy via anaerobic digestion.

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

- (1) 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 turnkey, 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;
- (2) 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;
- (3) 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. Provide a list of the same or similar projects designed, installed, or supplied and currently operating consistent with the substrate material with references, if available; and

(4) 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (8).

(1) Identify zoning and code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

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

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

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

(6) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(7) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(8) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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 basis.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified party. 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 party.

(1) Provide 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, and material balances as part of the unit operations flowchart.

(2) Describe the project site and address issues such as site access, foundations, backup equipment when applicable, and environmental concerns with emphasis on land use, air quality, water quality, soil degradation, habitat degradation, land use, visibility, odor, noise, construction, and installation issues. Identify any unique construction and installation issues.

(e) Project development schedule. 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 designs, permits and agreements, equipment procurement, system installation from excavation through startup and shakedown, and operator training.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.



(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) 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;
- (2) 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;
- (3) Provide information that supports the expected design life of the system and the timing of major component replacement or rebuilds;
- (4) Provide and discuss the risk management plan for handling large, potential failures of major components. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing; and
- (5) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

### Section 3. Geothermal, Electric Generation

The technical requirements specified in this section apply to electric generation geothermal projects, which are, as defined in § 4280.103, systems that use geothermal energy to produce high pressure steam for electric power production.

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

- (1) 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 turnkey, 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;
- (2) 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;
- (3) 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. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available; and
- (4) Describe the 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (7).

(1) Identify zoning and code issues and required permits and the anticipated schedule for meeting those requirements and securing those permits.

(2) 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.

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

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

(5) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated schedule for meeting those requirements and obtaining those agreements.

(6) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(7) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified party. 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 party.

(1) Provide 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.

(2) Describe the project site and address issues such as site access, proximity to the electrical grid, environmental concerns with emphasis on land use, air quality, water quality, habitat fragmentation, visibility, noise, construction, and installation issues. Identify any unique construction and installation issues.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup or shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding turbine warranties and availability of spare parts;
- (2) 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;
- (3) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;
- (4) Provide and discuss the risk management plan for handling large, potential failures of major components such as the turbine. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing; and

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

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

#### Section 4. Geothermal, Direct Use

The technical requirements specified in this section apply to direct use geothermal projects, which are, as defined in § 4280.103, systems that use thermal energy directly from a geothermal source.

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

- (1) 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 turnkey, 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;
- (2) 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;
- (3) 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. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available; and
- (4) 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (7).

(1) Identify zoning and code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

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

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

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

(6) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(7) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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.



(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified party. 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 party.

(1) Provide 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.

(2) Describe the project site and address issues such as site access, thermal backup equipment, environmental concerns with emphasis on land use, air quality, water quality, habitat fragmentation, visibility, noise, construction, and installation issues. Identify any unique construction and installation issues.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding system warranties and availability of spare parts;
- (2) 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;
- (3) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;
- (4) Provide and discuss the risk management plan for handling large, potential failures of major components. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing; and

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

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

## Section 5. Hydrogen Projects

The technical requirements specified in this section apply to hydrogen projects, which are, as defined in § 4280.103, renewable energy systems that produce hydrogen or, a renewable energy system that uses mechanical or electric power or thermal energy from a renewable resource using hydrogen as an energy transport medium.

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

- (1) 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 turnkey, 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;
- (2) 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;
- (3) 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. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available; and
- (4) 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (8).

- (1) Identify zoning and building code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.
- (2) Identify licenses where required and the schedule for obtaining those licenses.
- (3) Identify land use agreements required for the project and the anticipated schedule for securing the agreements and the term of those agreements.
- (4) Identify any permits or agreements required for solid, liquid, and gaseous emissions or effluents and the anticipated schedule for securing those permits and agreements.
- (5) Identify available component warranties for the specific project location and size.
- (6) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.
- (7) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.
- (8) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects shall be engineered by a qualified party. 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 party.

(1) Provide 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.

(2) Describe the project site and address issues such as site access, foundations, backup equipment when applicable, and any environmental and safety concerns with emphasis on land use, air quality, water quality, and safety hazards. Identify any unique construction and installation issues.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) Provide information regarding system warranties and availability of spare parts;
  - (2) 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;
  - (3) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;
  - (4) Provide and discuss the risk management plan for handling large, potential failures of major components. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing; and
  - (5) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator.
- (j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.



## Section 6. Solar, Small

The technical requirements specified in this section apply to small solar electric projects and small solar thermal projects, as defined in § 4280.103.

Small solar electric projects are those for which the rated power of the system is 10kW or smaller. 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, or which have a collector area of 1,000 square feet or less.

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

- (1) Discuss the qualifications of the suppliers of major components being considered;
- (2) Describe the knowledge, skills, and abilities needed to service, operate, and maintain the system for the proposed application; and
- (3) 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. Provide a list of the same or similar systems designed or installed by the design and installation team and currently operating with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (5).

(1) Identify zoning, building, and electrical code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

(3) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(4) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(5) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. Indicate the source of the solar data and assumptions.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will 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.

(1) Provide 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.

(2) Describe the project site and address issues such as solar access, orientation, proximity to the load or the electrical grid, environmental concerns such as water quality and land use, unique safety concerns such as hazardous materials handling, construction, and installation issues, and whether special circumstances exist.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. Provide a detailed description of historic or expected energy use and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) Ensure that systems must have at least a 5-year warranty for equipment. Provide information regarding system warranty and availability of spare parts;
- (2) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedules for the mechanical and electrical and software systems;
- (3) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance; and
- (4) Provide information regarding expected system design life and timing of major component replacement or rebuilds. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing.

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes. Describe any environmental compliance requirements such as proper disposal or recycling procedures to reduce potential impact from any hazardous chemicals.

## Section 7. Solar, Large

The technical requirements specified in this section apply to large solar electric projects and large solar thermal projects, as defined in § 4280.103.

Large solar electric systems are those for which the rated power of the system is larger than 10kW. 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 or that have a collector area of more than 1,000 square feet.

(a) Qualifications of project team. The large solar project team should consist of an equipment supplier of major components, a project manager, general contractor, system engineer, system installer, and system maintainer. One individual or entity may serve more than one role. Authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services must be provided. Authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life must also be provided. The application must:

- (1) 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 turnkey, 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;
- (2) Discuss the qualifications of the suppliers of major components being considered;
- (3) 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. Provide a list of the same or similar systems designed or installed by the design, engineering, and installation team and currently operating with references, if available; and

(4) 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (5).

(1) Identify zoning, building, and electrical code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

(3) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(4) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(5) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. Indicate the source of the solar data and assumptions.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards.

- (1) 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.
  - (2) 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.
  - (3) 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.
  - (4) 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, habitat fragmentation, and aesthetics, unique safety concerns, construction, and installation issues, and whether special circumstances exist.
- (e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. Provide a detailed description of historic or expected energy use and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

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



- (2) Describe the routine operations and maintenance requirements of the proposed system, including maintenance schedules for the mechanical, electrical, and software systems;
  - (3) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance; and
  - (4) Provide information regarding expected system design life and timing of major component replacement or rebuilds. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing.
- (j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes. Describe any environmental compliance requirements such as proper disposal or recycling procedures to reduce any potential impact from hazardous chemicals.

Section 8. Wind, Small

The technical requirements specified in this section apply to small wind systems, which are, as defined in § 4280.103, 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. Small wind systems are either stand-alone or connected to the local electrical system at less than 600 volts.

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

- (1) Discuss the small wind turbine manufacturers and other equipment suppliers of major components being considered in terms of their length of time in business and the number of units installed at the capacity and scale being considered;
- (2) Describe the knowledge, skills, and abilities needed to service, operate, and maintain the system for the proposed application; and
- (3) 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. Provide a list of the same or similar systems designed, installed, or supplied and currently operating with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (5).

- (1) Identify zoning, building, and electrical code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

(3) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses, where required, and the anticipated 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 as their interconnection agreement, describe the applicable local net metering program.

(4) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(5) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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.

(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will 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.

(1) Provide 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.

(2) Describe the project site and address issues such as access to the wind resource, proximity to the electrical grid or application load, environmental concerns with emphasis on historic properties, visibility, noise, bird and bat populations, and wildlife habitat destruction and/or fragmentation, construction, and installation issues and whether special circumstances such as proximity to airports exist. Provide a 360-degree panoramic photograph of the proposed site, including indication of prevailing winds when possible.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project, including the calculation of simple payback. 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 incentives, productivity incentives, loans, and grants. Provide a detailed description of historic or expected energy use and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

(1) 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;

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

(3) 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 the operation and maintenance of the system, and plans for in-sourcing or out-sourcing; and

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

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

Section 9. Wind, Large

The technical requirements specified in this section apply to wind energy systems, which are, as defined in § 4280.103, wind energy projects for which the rated power of the individual wind turbine(s) is larger than 100kW.

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

- (1) 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 turnkey, 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;
- (2) 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;
- (3) 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. Provide a list of the same or similar projects designed, installed, or supplied and currently operating with references, if available;
- (4) Discuss the qualifications of the meteorologist, including references; and

(5) 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 with references, if available.

(b) Agreements, permits, and certifications. 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 (b)(1) through (6).

(1) Identify zoning, building, and electrical code issues, and required permits and the anticipated schedule for meeting those requirements and securing those permits.

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

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

(4) For systems planning to interconnect with a utility, describe the utility's system interconnection requirements, power purchase arrangements, or licenses where required and the anticipated schedule for meeting those requirements and obtaining those agreements.

(5) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(6) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Resource assessment. Provide adequate and appropriate data to demonstrate the amount of renewable resource available. 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 the correlation between the site data and a nearby, long-term measurement site.



(d) Design and engineering. Provide authoritative evidence that the system will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards. Large wind systems must be engineered by a qualified party. Systems must be engineered as complete, integrated systems 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.

(1) Provide 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.

(2) Describe the project site and address issues such as site access, proximity to the electrical grid or application load, environmental concerns with emphasis on historic properties, visibility, noise, bird and bat populations, and wildlife habitat destruction and/or fragmentation, construction, and installation issues and whether special circumstances such as proximity to airports exist.

(e) Project development schedule. 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.

(f) Project economic assessment. Provide a study that describes the costs and revenues of the proposed project to demonstrate the financial performance of the proposed 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 description of applicable investment incentives, productivity incentives, loans, and grants. 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. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications and process and the conditions required for startup and shakedown for each equipment item individually and for the system as a whole. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life. The application must:

- (1) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding turbine warranties and availability of spare parts;
  - (2) 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;
  - (3) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;
  - (4) Provide and discuss the risk management plan for handling large, potential failures of major components such as the turbine gearbox or rotor. Include in the discussion, costs and labor associated with the operation and maintenance of the system, and plans for in-sourcing or out-sourcing;
  - (5) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator; and
  - (6) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance.
- (j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

## Section 10. Energy Efficiency Improvements

The technical requirements specified in this section apply to projects that involve energy efficiency improvements, which are, as defined in § 4280.103, improvements to a facility, building, or process that reduces energy consumption. The system engineering for such projects must be performed by a qualified party or certified Professional Engineer.

(a) Qualifications of project team. The energy efficiency project team is expected to consist of an energy auditor or other service provider, 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. Authoritative evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services must be provided. Authoritative evidence that vendors of proprietary components can provide necessary equipment and spare parts for the system to operate over its design life must also be provided. The application must:

- (1) Discuss the qualifications of the various project team members, including any relevant certifications by recognized organizations;
- (2) Describe qualifications or experience of the team as related to installation, service, operation and maintenance of the project;
- (3) 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
- (4) Discuss the manufacturers of major energy efficiency equipment being considered, including length of time in business.

(b) Agreements, permits, and certifications. Identify all necessary agreements and permits required for the energy efficiency improvement(s) and the status and anticipated schedule for securing those agreements and permits, including the items specified in paragraphs (b)(1) through (4). The applicant must also submit a statement certifying that the applicant will comply with all necessary agreements and permits for the energy efficiency improvement(s).

- (1) Identify building code, electrical code, and zoning issues and required permits, and the anticipated schedule for meeting those requirements and securing those permits.
- (2) Identify available component warranties for the specific project location and size.

(3) Identify all environmental issues, including environmental compliance issues, associated with the project on Form RD 1940-20, "Request for Environmental Information," and in compliance with 7 CFR part 1940, subpart G, of this title.

(4) Submit a statement certifying that the project will be installed in accordance with applicable local, State, and national codes and regulations.

(c) Energy assessment. Provide adequate and appropriate evidence of energy savings expected when the system is operated as designed.

(1) Provide 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.

(2) For energy efficiency improvement projects with total eligible project costs greater than \$50,000, an energy audit is required. An energy audit is a written report by an independent, qualified party 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:

(i) 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.

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

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

- (A) Estimate the annual energy and energy costs savings expected from each improvement identified in the potential project;
- (B) Calculate all direct and attendant indirect costs of each improvement; and
- (C) Rank potential improvements measures by cost-effectiveness.

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

- (A) Provide preliminary specifications for critical components.
- (B) Provide preliminary drawings of project layout, including any related structural changes.
- (C) 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.
- (D) Identify significant changes in future related operations and maintenance costs.
- (E) Describe explicitly how outcomes will be measured.

(3) For energy efficiency improvement projects with total eligible project costs equal to or less than \$50,000, an energy assessment or energy audit is required. If an energy assessment is performed, provide adequate and appropriate evidence of energy savings expected when the system is operated as designed. If an energy audit is performed, it must follow the requirements specified in paragraph (c) (2).

(d) Design and engineering. Provide authoritative evidence that the energy efficiency improvement(s) will be designed and engineered so as to meet its intended purpose, will ensure public safety, and will comply with applicable laws, regulations, agreements, permits, codes, and standards.

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

(2) 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.

(3) Identify possible suppliers and models of major pieces of equipment.

(e) Project development schedule. 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.

(f) Project economic assessment. For projects whose total eligible costs are greater than \$50,000, provide an analysis of the proposed project to demonstrate its financial performance, including the calculation of simple payback. The analysis should include applicable investment incentives, productivity incentives, loans and grants, and expected energy offsets or sales on a monthly and annual basis. In addition, provide other information necessary to assess the project's cost effectiveness.

(g) Equipment procurement. 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. Identify all the major equipment that is proprietary and justify how this unique equipment is needed to meet the requirements of the proposed design. Include a statement from the applicant certifying that "open and free" competition will be used for the procurement of project components in a manner consistent with the requirements of 7 CFR part 3015 of this title.

(h) Equipment installation. Describe fully 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 specifications 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. Include a statement from the applicant certifying that equipment installation will be made in accordance with all applicable safety and work rules.

(i) Operations and maintenance. Identify the operations and maintenance requirements of the energy efficiency improvement(s) necessary for the energy efficiency improvement(s) to perform as designed over the design life. The application must:

- (1) Provide information regarding component warranties and the availability of spare parts;
- (2) Describe the routine operation and maintenance requirements of the proposed project, including maintenance schedules for the mechanical and electrical systems and system monitoring and control requirements;
- (3) Provide information that supports expected design life of the improvement(s) and timing of major component replacement or rebuilds;



(4) Provide and discuss the risk management plan for handling large, potential failures of major components. Include in the discussion, costs and labor associated with the operation and maintenance of the improvement(s), and plans for in-sourcing or out-sourcing; and

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

(j) Dismantling and disposal of project components. Describe a plan for dismantling and disposing of project components and associated wastes at the end of their useful lives. Describe the budget for and any unique concerns associated with the dismantling and disposal of project components and their wastes.

oOo

**Renewable Energy and Energy Efficiency Improvement Program  
Evaluation Criteria Scoring Guideline  
Per 4280-B Regulation**

<b>Name of Applicant:</b> _____
<b>Type of Technology:</b> _____
<b>Funding Request:</b> _____
<b>Final Total Score (sum of Categories 1-10):</b>

List the maximum points the applicant is eligible for under each of the following ten categories, sum the individual scores, and place the total in the above box under "Final Total Score."

**(1) Quantity of Energy Replaced, Produced, or Saved**

Points may only be awarded for one category (A, B, or C).

(A) 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%, award 5 points.	Points
Greater than 25%, but equal to or less than 50%, award 10 points.	
Greater than 50%, award 15 points.	
Determine energy replacement 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 during the previous year by the applicable energy application. The estimated quantities of energy must be converted to British thermal units (BTU's), Watts, or similar energy equivalents to facilitate scoring. If the estimated energy produced equals more than 150% of the energy requirements of the applicable process(es), score the project as an energy generation project.	

Attach the documentation to substantiate this score for this category. You have identified this documentation via tab #\_\_\_\_\_. Your explanation of points awarded to be entered into the tracking system.

**Or**

(B) Energy Savings (include additional 5 points if applicable)

(1) If the estimated energy expected to be saved by the installation of the energy efficiency improvements will be from:

20% up to but not including 30%, award 5 points.	Points
30% up to but not including 35%, award 10 points.	
35% or greater, award 15 points.	
Energy savings will be determined by the projections in an energy assessment or audit.	

(2) Additional points.

If the project has total eligible project costs of \$50,000 or less AND opts to obtain a professional energy audit, <b>award an additional 5 points.</b>	Points
--	--------

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

Or

(C) Energy generation

If the proposed renewable energy system is intended primarily for production of energy for sale, award 10 points.	Points
---	--------

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(2) Environmental benefits**

If the purpose of the proposed system contributes to the environmental goals and objectives of other Federal, State, or local programs, award 10 points.	Points
Award points only if the applicant provides documentation from an appropriate authority supporting this claim.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(3) Commercial availability**

If the proposed system or improvement is currently commercially available and replicable, award 5 points.	Points
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, award 10 points.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(4) Technical Merit** - Score each paragraph (A) through (J) within this category according to the following rules. The contents of the Technical report will substantiate the score for technical merit. The total possible points for Technical Merit is 35.

**Scoring Rules for Technical Merit**

<b>If the description in the subparagraph ...</b>	<b>Award</b>
Has no significant weaknesses and exceeds the requirements of the subparagraph,	100% of the total possible score.
Has one or more significant strengths, and meets the requirements of the subparagraph,	80% of the total possible score.
Meets the basic requirements of the subparagraph, but also has several weaknesses,	60% of the total possible score.
Is lacking in one or more critical aspects, key issues have not been addressed, but the description demonstrates some merit or strengths,	40% of the total possible score.
Has serious deficiencies, internal inconsistencies, or is missing information,	20% of the total possible score.
Has no merit in this area,	0% of the total possible score.

**Technical Merit Scoresheet**

<b>The 10 subparagraphs which are the basis for evaluation.</b>	<b>Maximum possible score</b>	<b>% of score awarded</b>	<b>Score Awarded</b>
(A) <b>Qualifications of the project team.</b> The applicant has described the project team service providers, their professional credentials, and relevant experience. The description supports that the project team service, equipment, and installation providers have the necessary professional credentials, licenses, certifications, or relevant experience to develop the proposed project.	10		
(B) <b>Agreements and Permits.</b> The applicant has described the necessary agreements and permits required for the project and the schedule for securing those agreements and permits.	5		
(C) <b>Energy or Resource Assessment.</b> The applicant has described the quality and availability of a suitable renewable resource or an assessment of expected energy savings for the proposed system.	10		

**Technical Merit Scoresheet (concluded)**

<b>The 10 subparagraphs which are the basis for evaluation.</b>	<b>Maximum possible score</b>	<b>% of score awarded</b>	<b>Score Awarded</b>
<i>(D) <b>Design and Engineering.</b> The applicant has described the design, engineering, and testing needed for the proposed project. The description supports that the system will be designed, engineered, and tested so as to meet its intended purpose, ensure public safety, and comply with applicable laws, regulations, agreements, permits, codes, and standards.</i>	30		
<i>(E) <b>Project Development Schedule.</b> The applicant has described the development method, including the key project development activities and the proposed schedule for each activity. The description identifies each significant task, its beginning and end, and its relationship to the time needed to initiate and carry the project through to successful completion. The description addresses grantee or borrower project development cashflow requirements.</i>	5		
<i>(F) <b>Project Economic Assessment.</b> The applicant has described the financial performance of the proposed project, including the calculation of simple payback. The description addresses project costs and revenues, such as applicable investment and production incentives, and other information to allow the assessment of the project's cost effectiveness.</i>	20		
<i>(G) <b>Equipment Procurement.</b> The applicant has described the availability of the equipment required by the system. The description supports that the required equipment is available, and can be procured and delivered within the proposed project development schedule.</i>	5		
<i>(H) <b>Equipment Installation.</b> The applicant has described the plan for site development and system installation.</i>	5		
<i>(I) <b>Operations and Maintenance.</b> The applicant has described the operations and maintenance requirements of the system necessary for the system to operate as designed over the design life.</i>	5		

The 10 subparagraphs which are the basis for evaluation.	Maximum possible score	% of score awarded	Score Awarded
(J) <b>Dismantling and disposal of project components.</b> The applicant has described the requirements for dismantling and disposing of project components at the end of their useful lives and associated wastes.	5		
Total Possible Score	100	Total Score Awarded	
$\frac{\text{Total Score Awarded}}{\text{Total Possible Score}} \times 100 = \text{ \_\_\_\_\_\_ } \% \times 35 \text{ total possible} = \text{ \_\_\_\_\_\_ } \text{ points}$			<b>Points awarded</b>

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(5) Readiness (Grants only)**

If the applicant has written commitments, prior to the Agency receiving the complete application, from the source(s) confirming commitment of:

50% up to, but not including, 75% of the matching funds, award 5 points.	Points
75% up to, but not including, 100% of the matching funds, award 10 points.	
100% of the matching funds, award 15 points.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(6) Small Agricultural Producer/Very Small Rural Business**

If the applicant is an agricultural producer producing agricultural products with a gross market value of:

less than \$600,000 in the preceding year, award 5 points.	
less than \$200,000 in the preceding year, <b>OR</b> is a Very Small Rural Business as defined in 4280.103 (a business with less than 15 employees and less than \$1 million in annual receipts), award 10 points.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(7) Simplified application**

If an applicant is eligible for and uses the simplified application process or if the project has total eligible project costs of \$200,000 or less, award 5 points.	Points
--	--------

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(8) Previous grantees and borrowers**

If the applicant has not been awarded a grant or loan under this program within the 2 previous Federal fiscal years, award 5 points.	Points
--	--------

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(9) Return on investment**

If the proposed project will return the cost of investment in Less than 4 years, award 10 points.	Points
4 years up to but not including 8 years, award 4 points.	
8 years up to 11 years, award 2 point.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.

**(10) Loan Rate (Guaranteed Loans only; 4280.129 (e)):**

If the rate of the loan is below the Prime Rate (as published in the Wall Street Journal) plus 1.5 percent, award 5 points; <b>OR</b>	Points
If the rate of the loan below the Prime Rate (as published in the Wall Street Journal) plus 1 percent, award 10 points.	

Attach the documentation to substantiate this score for this category.  
 You have identified this documentation via tab #\_\_\_\_\_.  
 Your explanation of points awarded to be entered into the tracking system.