



Rural Development
U.S. DEPARTMENT OF AGRICULTURE

Section 9003
Biorefinery, Renewable Chemical and Biobased
Product Manufacturing Assistance

Fiscal Year 2022 Program Application Guide

Instructions and notice to applicants:

- This guide is intended to help you, but you do not have to use it in order to submit an application.
- Using the application guide will not favorably impact your application.
- Regardless of whether or not you use the guide, you must complete and submit all required federal forms and registrations, and include documentation that supports applicant and project eligibility claims, as well as priority points.
- You also must ensure you provide complete responses to all eligibility and evaluation questions. This includes summarizations of certain parts of your business plan, which you also will provide in its entirety as an attachment to your application.
- Incomplete applications **will not** be considered for funding.
- Certifications, statements, and other standard terms used in this guide (examples include “you,” “I,” “we,” “it,” “applicant,” “entity,” and “borrower,” among others) refer to the **legal entity** applying for the loan guarantee. By checking, signing, or otherwise acknowledging these elements, you confirm they are true and correct.
- To be considered for Section 9003 program funding, you must submit your complete, signed Phase 1 application and all required documents no later than **11:59 p.m. eastern time on [month, day, year]**. You will find submittal instructions under the “Application format, template, and submittal” subheading on page 6.

A note about website links: For ease of reference, this guide provides links to relevant, useful information hosted outside the USDA domain. Federal endorsement of non-USDA programs or activities is neither intended nor implied. Please be aware that, when you access information through a link provided in this document, you are subject to the copyright and licensing restrictions of those sites. All links in this document were active as of July 2022.

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Program Overview

The Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program – also known as the “Section 9003 program” – provides loan guarantees to eligible applicants for the “development, construction, and retrofitting of commercial-scale biorefineries using eligible technology.”

You can learn more about the definitions associated with the Section 9003 program in Subpart C, Section 4279.202 at this *Federal Register* link: <https://go.usa.gov/xJHmk>. Additional background information is available in 7 CFR 4287, subpart D (available at this link: <https://go.usa.gov/xJPqv>)

While originally authorized in Title IX of the 2008 Farm Bill (Public Law 110-246, available at this link: <https://go.usa.gov/xJUSK> - PDF), the Section 9003 program was amended in the 2014 Farm Bill (Public Law 113-79, available at this link: <https://go.usa.gov/xJUSU> - PDF) with several changes designed to ensure greater diversity in the types of projects approved.

Among the revisions:

- The program now includes renewable chemicals and biobased product manufacturing
- Program language more clearly defines renewable chemicals and types of biobased product manufacturing

The Section 9003 program application process has two phases. Phase 1 determines lender, borrower, and project eligibility, assesses preliminary economic and technical feasibility, and assigns a priority score to the application. Using Phase 1 scores to rank applicants, we will then invite high-scoring applicants to submit Phase 2 applications.

Phase 2 application materials must be submitted as project planning and engineering is finalized, and includes such things as environmental assessments, technical reports, financial models, and the lender’s credit evaluation. **NOTE:** Ranked Phase 1 applicants not invited to submit a Phase 2 application will be carried forward and can be used to apply for one additional cycle.

Document Purpose

The purpose of this guide is to help eligible applicants navigate Section 9003 program application requirements and submit a complete application as required in the Notice of Funding Opportunity published in the *Federal Register* (available at this link: <https://go.usa.gov/xJHmk>).

Required Forms

The following forms (available at this link: <https://go.usa.gov/xJP3e> – click the “To Apply” tab) are required to complete your Section 9003 program application:

- Form RD 4279-1 “Application for Loan Guarantee” (available at this link: <https://go.usa.gov/xJfHW> - PDF)

Application Letter of Intent

Before you submit your application, you must submit a letter of intent identifying the borrower, the lender, and project sponsors. Either the lender or borrower can submit this letter, which must describe the project and its location, proposed feedstock, the primary conversion technologies of the facility, the products to be produced, and an estimate of total project cost. Unless otherwise specified by a notice in the *Federal Register*, the letter of intent is due **no later than 30 days prior** to the application due dates – April 1 and October 1, respectively. In certain circumstances and at our discretion, we will consider applications submitted without a letter of intent.

Application Resources

The Section 9003 program fact sheet is available at this link: <https://go.usa.gov/xSc5C>.

Application Format, Submittal, and Template

Your application must be submitted electronically, and you must also mail a single hard copy of it to the address provided below. Carefully follow the table of contents and file name conventions described in Appendix A, and use a font size of 10 or larger in all your materials.

While we prefer you submit your electronic files using a web-based portal such as Box, (available at <https://www.box.com/>) or Microsoft OneDrive, (available at <https://onedrive.live.com/about/en-us/signin/>), you can also submit it by email to EnergyPrograms@rd.usda.gov.

If you choose to use Adobe Acrobat, be sure your files are bookmarked and searchable. We prefer Microsoft Excel for financial information, including your financial model and pro-forma financial statements.

Submit your complete, hard copy application to:

USDA Rural Development
Rural Business-Cooperative Service
1400 Independence Avenue, S.W.
Mail Stop 3201
Washington, D.C. 20250-3201

Phase 1 Application Requirements

The Phase 1 application allows USDA Rural Development to evaluate, prioritize, and select applications for the Phase 2 process. Your Phase 1 application must provide enough information for us to determine lender, borrower, and project eligibility, assess your project's economic and technical feasibility, and help us assign a priority score.

Your application must clearly and accurately identify the processes used to produce your products, their state of development (such as lab, pilot, or demonstration), and current deployment scale. In addition, you must provide a persuasive reason for your project, and all application criteria must be supported by true statements of fact.

Lenders must submit a complete application for each loan guarantee sought. Phase 1 applications must contain the information specified in 7 CFR Part 4279.161 (available at this link: <https://go.usa.gov/xJPCF>) and summarized below, and be organized using a table of contents as described in Appendix A, using the format explained below.

Section 1: Project Summary

Limit your summary to one page. **Note:** A summary extracted from your Letter of Intent (LOI) is acceptable.

- **Title:** Provide a descriptive title for your project.
- **Borrower Eligibility:** Describe how you meet the eligibility criteria in 7 CFR 4279.209 (available at this link: <https://go.usa.gov/xJPYT>).
- **Project Eligibility:** Describe how the project meets the eligibility criteria in 7 CFR 4279.210 (available at this link: <https://go.usa.gov/xJPY8>). State whether the application is for construction and development or retrofitting of a **biorefinery**, or instead is for the construction and development or retrofitting of a **biobased product manufacturing facility**.
- **Project Funds:** Submit a spreadsheet identifying fund sources, amounts, and availability. Include funds source contact information. Attach applications or other pertinent communication between the borrower and the fund source.
- **Project Timeline:** Create a timeline beginning with loan application Phase 1, and incorporating loan application Phase 2. Include final project planning and engineering, anticipated completion of environmental documentation, obtaining required permits, loan closing, plant construction, commissioning, and ramp-up, ending with a stabilized state of operation.
 - Provide an executive summary, project action plan, and scope of work
 - Include your strategy, activities, budget, goals, and objectives

- Describe plans to maintain project sustainability once the loan guarantee has been issued

Section 2: Application Form

Use Form RD 4279-1 (available at this link: <https://go.usa.gov/xJP4q> - PDF) to complete your application. Your proposed lender must complete Part B. **Reminder:** Incomplete applications will not be considered.

Section 3: Financial Statements

You must provide the following:

- The borrower's most recent **audited financial statements**, unless alternative financial statements are authorized by USDA Rural Development
- A current (not more than 90 days old) balance sheet, and a pro-forma balance sheet at startup

Section 4: Financial Model

Using an electronic format, submit a financial model with a projected budget and balance sheets, income, expense, and cash flow statements, and working capital and capital expense projections for the full term of the loan. Projections must be:

- Displayed in a monthly format, cover a period of three years after stabilized operation, and then be submitted annually thereafter
- Supported by a list of assumptions illustrating their basis

Note: Depending on the complexity of the project and the borrower's financial condition, we may seek additional financial statements and other relevant information.

Section 5: Feasibility Study

Your feasibility study must be prepared by a qualified, independent third party using information gathered from other qualified parties. Examples include independent engineering reports, marketing and feedstock studies, business plans, and financial statements prepared by certified public accountants. Technical feasibility information must indicate the project's current scale of development. By this is meant technology demonstrated at laboratory scale, pilot scale, demonstration scale, or nearing full-scale production deployment.

When a specific technology (for example, pyrolysis) is indicated, include whether the process is fast or slow, and identify yields.

All information used to prepare your feasibility study must be submitted as attachments. **Examples of acceptable feasibility study elements are outlined in Appendix B.**

Section 6: Business Plan

The lender must submit the borrower's business plan, including all information specified in Appendix C, paragraph F, numbers 1 – 10.

Section 7: Scoring Information

Your application must contain information in a format that meets the scoring criteria outlined in 7 CFR 4279.266 (available at this link: <https://go.usa.gov/xJPDS>).

Recommendation: Cross-reference your information to the portions of your application that support that section. (For more information, see "Scoring Criteria" in Appendix D.)

Section 8: Intergovernmental Consultation

Intergovernmental consultation comments are required as part of 2 CFR Part 415, Subpart C (available at this link: <https://go.usa.gov/xJPkn>). If you need help with this section, please contact the Rural Energy Coordinator in the USDA Rural Development **state office closest to the location of your proposed project**. A list is available at <https://go.usa.gov/xJPKk> - PDF.

During Phase 1, USDA Rural Development will screen all complete project applications. Once project eligibility is established, preliminary economic and technical feasibility, financial statements, and business plans will be reviewed, given a priority score, and ranked competitively.

In addition to confirming eligibility, all applications will be evaluated for technical and financial merit, reasonable assurance of repayment, sufficient project equity, and compliance with applicable statutes and regulations.

Note: Because our review relies on accurate, detailed information to determine priority scores, it is crucial to provide as much credible information as possible. The highest ranking projects will be selected to apply for Phase 2.

Phase 2 Application Requirements

USDA Rural Development will notify Phase 2 applicants of their selection in writing. Phase 2 application materials must be submitted using 7 CFR Part 4279.261(k) (available at this link: <https://go.usa.gov/xJP8M>) as your project planning and engineering is finalized.

You must include – as summarized below – a technical report, environmental assessment, financial model, and the lender’s credit evaluation as specified in 7 CFR Part 4279.215 (available at this link: <https://go.usa.gov/xJP9c>).

Section 1: Technical Report or Assessment

Your technical report or assessment must be completed by a qualified independent engineer as described in Appendix E and in 7 CFR 4279.161(k)(8) (available at this link: <https://go.usa.gov/xJP92>).

Our determination of your project’s technical feasibility is based on this report. In addition, reliable evidence showing 120 days of continuous, steady-state production from an integrated demonstration unit (IDU) must be provided to the lender – and to USDA Rural Development – for review and determination of technical feasibility.

Reliable integrated demonstration campaign results also must be provided in 30-day intervals – including a comprehensive final technical report by an independent engineer (IE) – at the conclusion of the integrated demonstration period.

The integrated demonstration unit must prove the ability to use project-relevant feedstock and produce advanced biofuel, renewable chemical, or biobased product at a yield, unit production level, quantity, and quality consistent with the design basis of the project. The borrower must provide USDA Rural Development sufficient information on the integrated campaign design ensuring that operation duration, quality, and quantity specifications are incorporated into the final design for the commercial facility.

Section 2: Environmental Assessment or Report

Your environmental assessment or report must meet National Environmental Policy Act (NEPA – an overview is available at this link: <https://go.usa.gov/xJP55>) and USDA Rural Development (7 CFR 1970 – available at this link: <https://go.usa.gov/xJP5m>) policies and requirements.

Guidelines for preparing your environmental assessment or report can be found on our Environmental Guidance webpage at this link: <https://go.usa.gov/xJfyK>. Each proposal will be evaluated on a case-by-case basis to determine the proper level of NEPA review by USDA Rural Development environmental staff. Both the lender and borrower must cooperate with USDA in preparing the review.

Caution: Actions taken prior to – or during – the application process that could have a negative impact on the environment (for example, starting construction prior to completion of the environmental review) can result in project ineligibility.

Thus, it is important to contact us at EnergyPrograms@rd.usda.gov as soon as you decide to seek Section 9003 program funding. We will help you determine the environmental requirements for your project.

You must also provide accurate environmental information beginning with day one of the application process, and continue to note all changes and revisions throughout the project's course of development.

Section 3: Update of Application Materials

As necessary, provide updates to the application materials you submitted in Phase 1.

Section 4: Other Information

Provide any other information requested by USDA Rural Development. (Examples include contracts and agreements for feedstock, offtake, engineering, procurement, construction, and so on.)

Section 5: Lender Analysis and Credit Evaluation

The lender must analyze all credit factors associated with each proposed loan, and apply its professional judgment to determine that, considered together, the credit factors ensure loan repayment. The application must adequately address all key risk factors that contribute to the creditworthiness of the project. USDA Rural Development will carefully review the lender's analysis to assess project strengths and weaknesses.

We will perform technical, financial, and legal reviews to identify and assess the scale and impact of risks associated with the project, the allocation of risk among the parties, and the extent to which risks are mitigated. Examples of risk factors include:

- **Debt service and structure:** debt service coverage, equity contribution, debt maturity, financial covenants, derivatives, and liquidity
- **Project revenue:** off-take agreements, counterparty credit, market demand, industry, and competition
- **Technology:** commercial availability, complexity and scalability, equipment warranties, and guarantees
- **Project sponsor and structure:** ownership and equity investment
- **Operational:** management team, USDA Rural Development contract terms, availability of labor, and pass-through
- **Construction and Completion:** Engineering, procurement, and construction (EPC) contract, cost structure, delay risk, and contingency plans
- **Legal:** ability to ring-fence assets, step-in rights, Intellectual Property (IP) rights, strength of contracts, land leases and permits; and state and local regulations
- **Resources and Feedstocks:** strength and duration of agreements; availability of substitute feedstocks

- **Infrastructure:** Site and facilities condition, utility requirements, maintenance and improvement plans

Section 6: Appraisals

Appraisals conducted as specified under CFR 4279.244 (available at this link: <https://go.usa.gov/xJEDa>). Our detailed evaluation of your appraisals will be based on the nature of the collateral pledged, reports submitted by the lender, and expected cash availability under a default scenario.

Section 7: Lender's Proposed Loan Agreement

You must provide a proposed or sample loan agreement that addresses:

- Prohibition against assuming the liabilities or obligations of others
- Restrictions on dividend payments
- Limitations on the purchase or sale of equipment and fixed assets
- Limitations on compensation of officers and owners
- Minimum working capital or current ratio requirement
- Maximum debt-to-net worth ratio
- Restrictions concerning consolidations, mergers, or similar circumstances
- Limitations on selling the business without lender concurrence
- Loan repayment and amortization

Section 8: Estimated Timing of Loan Closing

Provide an estimate timing of loan closing and issuance of the loan note guarantee (pre- or post-construction).

Section 9: Credit Rating

Provide an evaluation and rating of the project's total indebtedness – **without consideration of a guarantee from the federal government** – from a nationally-recognized (and USDA Rural Development-approved) rating agency. Examples of USDA-approved rating agencies can be found on the U.S. Securities and Exchange website at this link: <https://go.usa.gov/xJzEz>.

Appendix A – Phase 1 Application Structure

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Appendix A: Phase 1 Application Structure

Electronic files can be sent to us using a web-based portal (preferred) such as Box, (available at <https://www.box.com/>) or Microsoft OneDrive, (available at <https://onedrive.live.com/about/en-us/signin/>), In addition to submitting your application electronically, you must also send one hard copy to us at this address:

USDA Rural Development
Chris Cassidy
USDA Research Center
24106 N Bunn Rd
Prosser, WA 99350

Follow the table of contents and file name formats noted below. Your hard-bound copy must include:

- A cover sheet with your project title, the lender and borrower's names, and a brief project description
- Page numbers
- Labeled tabs as described in the section below

Document Naming Conventions:

- Use the following naming conventions to label your electronic files:
[Project name] followed by an underscore (_) and then [Type of application document]
Here is an example using Adobe Portable Document Format (PDF):
[GreenFuelsBiorefinery_Section9003Application.pdf](#)
- If your application includes multiple files, use this naming convention:
[Project name] followed by an underscore (_) and then [Type of application document] followed by another underscore (_), and then [Application document subpart with title, numbered consecutively]

Using the example of a feasibility study that includes multiple files, here is how the naming convention looks for an Adobe Portable Document Format (PDF):

[GreenFuelsBiorefinery_Section9003Application_ExecutiveSummary.pdf](#)

[GreenFuelsBiorefinery_Section9003Application_FeasibilityStudy1.pdf](#)

[GreenFuelsBiorefinery_Section9003Application_FeasibilityStudy2.pdf](#)

[GreenFuelsBiorefinery_Section9003Application_MarketFeasibility.pdf](#)

Phase 1 Application Tab Order

Reference: CFR Part 4279.261 (a) - (j) – available at this link: <https://go.usa.gov/xJE9m>.

- A. Tab 1: Project Summary (include page numbers for each item listed below)
 - 1. Title
 - 2. Borrower eligibility
 - 3. Project eligibility
 - 4. Project funds
 - 5. Project timeline
- B. Tab 2: Application Form
- C. Tab 3: Financial Statements (include page numbers for each item listed below)
 - 1. Borrower's audited financial statements
 - 2. Balance sheets
- D. Tab 4: Project Financial Model
- E. Tab 5: Feasibility Study
- F. Tab 6: Business Plan
- G. Tab 7: Scoring Information
- H. Tab 8: Intergovernmental Consultation
- I. Tab 9: Other Information (identify and tab as necessary)

Appendix B – Feasibility Study Outline

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Appendix B: Feasibility Study Outline

Reference: 7 CFR Part 4279.261 (e) – available at this link: <https://go.usa.gov/xJEnB>

Components:

A. Executive Summary

1. Introduction and a brief, general project overview
2. Economic feasibility determination
3. Market feasibility determination
4. Technical feasibility determination
5. Financial feasibility determination
6. Management feasibility determination
7. Recommendations for implementation

B. Economic Feasibility

1. Describe your feedstock. Include:
 - a. Feedstock source management
 - b. Estimates of feedstock volumes and costs
 - c. Collection, pre-treatment, transportation, and storage
 - d. Feedstock risks
2. Verify that woody biomass feedstock from National Forest System or public lands will not be used for a higher-value product
3. Describe the impact on similar biorefineries in the area in which the borrower proposes to locate the project, if applicable
4. Describe the potential impact on existing manufacturing plants or other facilities that use similar feedstock if your proposed production technology is adopted
5. Provide projections of impact on resource conservation, public health, and the environment
6. Include economic feasibility details about your project site such as a description of its size and suitability, proximity to utilities and modes of transportation, storage options, and so on
7. Confirm access to trained – or trainable – labor
8. Describe the availability of infrastructure, including utilities, and transportation (road, rail, and so on) to the site

9. Explain the overall economic impact of your project. Include direct and indirect jobs created or saved, additional markets created for agricultural and forestry products and agricultural waste material, and the potential for rural economic development
10. Discuss the feasibility of – and any plans for – your project to work with producer associations or cooperatives. Include the estimated amount of feedstock purchased annually from – or sold to – producer associations and cooperatives

C. Market Feasibility

Include:

1. Information on the sales organization and management
2. An explanation of the nature and extent of the market, along with the market area
3. Marketing plans for the sale of projected output-principal products and byproducts
4. Extent of competition, including other similar facilities, in the market area
5. Commitments from purchasers of off-take -principal products and secondary products, degree of commitment, duration or terms of off-take agreements, and the financial strength of counterparties
6. Risks related to the industry, including
 - a. Industry status
 - b. Specific market risks
 - c. Competitive threats and advantages

D. Technical Feasibility

Demonstrate:

1. Suitability of the selected site for the intended use
2. Scale of development for which the process technology has been proven (for instance, pilot, demonstration, or semi-work scale facility). Provide evidence that the proposed technology is feasible and can succeed.
NOTE: The proposed technology must meet the definition of “eligible technology” as described in 7 CFR 4279.202 (available at this link: <https://go.usa.gov/xJfpc>).
3. The degree of integration of all processes. A summary of any integrated demonstration unit test results also must be submitted.

4. Specific volume produced from the technology of the process (expressed either as volume of feedstock processed in tons-per-unit of time, or as product in gallons-per-unit of time)
5. Identification and estimation of project operation and development costs, specifying the level of accuracy of the estimates, and the assumptions upon which they are based
6. Detailed analysis of project costs, including:
 - a. Project management, professional services, and resource assessments
 - b. Project design and permitting
 - c. Land agreements and site preparation
 - d. Equipment requirements, along with system installation startup and shakedown
 - e. Warranties, insurance, financing, and operation and maintenance costs
7. Projected timeline describing borrower plans from the time of loan application through plant construction, commissioning, and ramp-up
8. Potential for commercial replication of the proposed system
9. Risks related to:
 - a. Biorefinery construction
 - b. Production of the advanced biofuel and biobased product, including renewable chemical, if applicable
 - c. Regulation and governmental action
 - d. Design-related factors that can impact project success
 - e. Technology scale-up risk

E. Financial Feasibility

1. Address the reliability of the financial projections and the assumptions upon which they are based. Include all sources and uses of project capital, private or public, and federal or non-federal funds. Provide detailed descriptions and analysis of projected balance sheets, income, expense, and cash flow statements covering the useful life of the project.

2. Provide a detailed description of the degree to which the project's financial feasibility is dependent upon:
 - a. Investment incentives
 - b. Productivity incentives
 - c. Loans and grants
3. Identify project authorities, renewable identification numbers (RINs) value, tax credits, other credits, and any subsidies that affect the project
4. Address any constraints or limitations in the financial projections
5. Describe the ability of the business to achieve the projected income and cash flow
6. Assess the cost accounting system
7. Confirm the availability of short-term credit or other means to meet seasonal business costs
8. Verify the adequacy of raw materials and supplies
9. Provide a sensitivity analysis, including feedstock and energy costs, along with product and byproduct prices
10. Address risks related to the:
 - a. Project
 - b. Borrower financing plan
 - c. Operational units
 - d. Tax issues

F. Management Feasibility

1. Highlight borrower's or management's previous experience concerning:
 - a. Production of advanced biofuel and biobased product, including renewable chemicals, as applicable
 - b. Acquisition of feedstock
 - c. Marketing and sale of off-take
 - d. The receipt of federal financial assistance, including amount of funding, date received, purpose, and outcome
2. Describe your management plan for the procurement of feedstock and labor, marketing of the off-take, and management succession.

3. Address risks related to:

- a. The borrower as a company (for example, identify potential development stage risks regarding the structure of your management team or other personnel)
- b. Conflicts of interest
- c. Management strengths and weaknesses

G. Qualifications

You must submit a resume or statement of qualifications of the application author and any contributors to the feasibility study. Include the prior, applicable experience of all pertinent parties.

Appendix C – Business Plan Outline

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Appendix C: Business Plan Outline

Reference: 7 CFR Part 4279.261 (f) – available at this link: <https://go.usa.gov/xJEA3>

The lender must submit the borrower's business plan and include the information specified below. **NOTE:** This information can be omitted if it is included in your feasibility study.

1. Describe – or provide an organizational chart of – the borrower's ownership structure and any affiliation with other entities. List their names, and describe the relationship of the borrower's parent company, affiliates, and subsidiaries. Identify local ownership, if applicable.
2. The borrower's succession planning, addressing both ownership and management
3. The borrower's experience and management experience
4. The products and services to be provided, and the borrower's business strategy
5. Possible vendors, and models of major system components
6. The availability of the resources (for example, labor, raw materials, and supplies) necessary to provide the planned products and services
7. Site location and its relation to product distribution (for example, rail lines or highways) and any land use or other permits necessary to operate the facility
8. The market for the product and its competition, including any competitive threats and advantages
9. Projected balance sheets, income and expense statements, and cash flow statements for a period of not less than three years of stabilized operation
10. A description of the proposed use of funds

Appendix D – Scoring Criteria

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Scoring Criteria

Reference: 7 CFR Part 4279.266 – available at this link: <https://go.usa.gov/xJEsQ>

USDA Rural Development will score each eligible application that meets the minimum requirements for technical and economic feasibility. **A maximum of 125 points is possible.** The criteria include determining if the borrower has established a market for the advanced biofuel and biobased products, including renewable chemicals, as applicable. **A maximum of 20 points is possible.** Points are determined as follows:

1. Degree of commitment on off-take agreements. **A maximum of 6 points is possible.**
 - a. If the borrower has signed off-take agreements for the purchase for more than 50 percent of the dollar value of off-take, **6 points** will be awarded.
 - b. If the borrower has signed letters of **intent** to enter into off-take agreements (or comparable documentation) for the purchase for more than 50 percent of the dollar value of off-take (or, a combination of signed contracts or agreements, letters of intent, or comparable documentation), **4 points** will be awarded.
 - c. If the borrower has signed letters of **interest** to enter into off-take agreements (or comparable documentation) for the purchase for more than 50 percent of the dollar value of off-take (or, a combination of signed off-take agreements, letters of intent, or comparable documentation), **2 points** will be awarded.

Degree of commitment of off-take agreements

Points awarded: ___ / 6

2. Duration of off-take agreements. **A maximum of 6 points is possible.**
 - a. If the borrower commits to enter into off-take agreements prior to loan closing for the purchase for equal to or greater than 50 percent of the dollar value of off-take for the period not less than the loan term, **6 points** will be awarded.
 - b. If the borrower commits to enter into off-take agreements prior to loan closing for the purchase for equal to or greater than 50 percent of the dollar value of off-take for the period not less than 5 years, but less than the term of the loan, **4 points** will be awarded.
 - c. If the borrower commits to enter into off-take agreements prior to loan closing for the purchase for equal to or greater than 50 percent of the dollar value of off-take for the period not less than 1 year, but less than 5 years, **2 points** will be awarded.

Duration of off-take agreements

Points awarded: ___ / 6

3. Financial strength of the off-take counterparty. **A maximum of 4 points is possible.**
- a. If the borrower commits to enter into off-take agreements prior to loan closing for purchase for equal to or greater than 50 percent of the dollar value of off-take, with an off-take counterparty with a corporate credit rating **not less than AA, Aa2, or equivalent, 4 points** will be awarded.
 - b. If the borrower commits to enter into off-take agreements prior to loan closing for the purchase for equal to or greater than 50 percent of the dollar value of off-take, with an off-take counterparty with a corporate credit rating **less than AA, Aa2, or equivalent, but not less than A-, or A3, or equivalent, 2 points** will be awarded.
 - c. If the borrower commits to enter into off-take agreements prior to loan closing for the purchase for equal to or greater than 50 percent of the dollar value of off-take, with an off-take counterparty with a corporate credit rating **less than A-, or A3, or equivalent, but not less than BBB-, or Baa3, or equivalent, 1 point** will be awarded.

Financial strength of the off-take counterparty

Points awarded: ___ / 4

4. Revenue dependency on sales tax credits, carbon credits, or other federal or state subsidies. **A maximum of 4 points is possible.**
- a. If the total of revenues from tax credits, carbon credits, or other federal or state subsidies is **less than or equal to** 10 percent of the project's total revenues on an annual basis in the borrower's base case of financial projections, **4 points** will be awarded.
 - b. If the total of revenues from tax credits, carbon credits, or other federal or state subsidies is **greater than** 10 percent but **less than or equal to** 20 percent of the project's total revenues on an annual basis in the borrower's base case of financial projections, **2 points** will be awarded.
 - c. If the total of revenues from tax credits, carbon credits, or other federal or state subsidies is **greater than** 20 percent but **less than or equal to** 30 percent of the project's total revenues on an annual basis in the Borrower's base case of financial projections, **1 point** will be awarded.

Revenue dependency on subsidies

Points awarded: ___ / 4

5. Whether the area in which the borrower proposes to locate the project (defined as the area that will supply the feedstock to the proposed project), has any other similar facilities. **A maximum of 5 points is possible.** Points are determined as follows:
- a. If the area that will supply the feedstock to the proposed project does not have any other similar facilities, **5 points** will be awarded.
 - b. If there are other similar facilities located within the area that will supply the feedstock to the proposed project, **0 points** will be awarded.

Does the area already have similar facilities?

Points awarded: ___ / 5

6. Whether the borrower is proposing to use a feedstock or biobased output of biorefineries not previously used in the production of advanced biofuels or biobased products, including renewable chemicals. **A maximum of 10 points is possible.** Points are determined as follows:
- a. If the borrower proposes to use a feedstock **previously used** in the production of advanced biofuels and biobased products, including renewable chemicals, in a commercial facility, **0 points** will be awarded.
 - b. If the borrower proposes to use a feedstock **not previously used** in the production of advanced biofuels and biobased products, including renewable chemicals, in a commercial facility, **10 points** will be awarded.

Output not previously used?

Points awarded: ___ / 10

7. Whether the borrower proposes to work with producer associations or cooperatives. **A maximum of 5 points is possible.** Points are determined as follows:
- a. If **at least 50 percent** of the dollar value of feedstock to be used by the proposed project will be supplied by producer associations and cooperatives, **5 points** will be awarded.
 - b. If **at least 30 percent** of the dollar value of feedstock to be used by the proposed project will be supplied by producer associations and cooperatives, **3 points** will be awarded.

Producer associations or cooperatives

Points awarded: ___ / 5

8. The level of financial participation by the borrower, including support from non-federal government sources and private sources. **A maximum of 20 points is possible.** Points are determined as follows:
- a. If the sum of the loan amount requested and other direct federal funding is **less than or equal to 50 percent** of the total eligible project cost, **20 points** will be awarded.
 - b. If the sum of the loan amount requested and other direct federal funding is **greater than 50 percent but less than or equal to 55 percent** of the total eligible project cost, **16 points** will be awarded.
 - c. If the sum of the loan amount requested and other direct federal funding is **greater than 55 percent but less than or equal to 60 percent** of the total eligible project cost, **12 points** will be awarded.
 - d. If the sum of the loan amount and other direct federal funding is **greater than 60 percent but less than or equal to 65 percent** of total eligible project cost, **8 points** will be awarded.
 - e. If the sum of the loan amount and other direct federal funding is **greater than 65 percent but less than or equal to 70 percent** of the total eligible project cost, **4 points** will be awarded.

Non-federal government resources

Points awarded: ___ / 20

9. Whether the borrower has established that the process proposed will have a positive effect on three impact areas: resource conservation (such as water, soil, forest), public health (potable water, air quality), and the environment (meeting renewable fuel standards, reducing greenhouse gas emissions or particulate matter). **A maximum of 10 points is possible.** Points are determined as follows:
- a. If process adoption will have a positive impact on **any one of the three** impact areas, **3 points** will be awarded.
 - b. If process adoption will have a positive impact on **two of the three** impact areas, **6 points** will be awarded.
 - c. If process adoption will have a positive impact on **all three** impact areas, **10 points** will be awarded.

NOTE: If the project proposes to use a feedstock that can be used for human or animal consumption, **5 points will be deducted** from the score.

Positive effect on three impact areas

Points awarded: ___ / 10

10. Whether the borrower can establish that the proposed technology will not have any economically-significant negative impact on existing manufacturing plants or other facilities using similar feedstocks or biobased outputs. **A maximum of 5 points is possible.** Points are determined as follows:

- a. If the borrower has **failed to establish** through an independent, third-party feasibility study that the proposed technology will not have any economically-significant negative impact on existing manufacturing plants or other facilities using similar feedstocks, **0 points** will be awarded.
- b. If the borrower **has established** through an independent, third-party feasibility study that the proposed technology will not have any economically-significant negative impact on existing manufacturing plants or other facilities uses similar feedstocks, **5 points** will be awarded.

NOTE: If the feedstock is wood pellets, **0 points** will be awarded.

Economically-significant negative impacts
Points awarded: ___ / 5

11. The potential for rural economic development. **A maximum of 20 points is possible.** Points are determined as follows:

- a. If the project is in a rural area as defined in 7 U.S.C. 1991(a)(13)(A) and (D) (available at <https://go.usa.gov/xJfpy> – PDF) **5 points** will be awarded.
- b. If the project creates jobs through direct employment with an average wage that exceeds the county median household wages where the project will be located, **5 points** will be awarded.
- c. If the majority of feedstock to be used by the project on an annual basis is harvested from the land, **10 points** will be awarded.

Potential rural economic development
Points awarded: ___ / 20

12. The level of local ownership of the facility proposed in the application. **A maximum of 5 points is possible.** Points are awarded as follows:

- a. If local owners have an ownership interest in the facility of **more than 20 percent, but less than or equal to 50 percent, 3 points** will be awarded.
- b. If local owners have an ownership interest in the facility of **more than 50 percent, 5 points** will be awarded.

Local ownership
Points awarded: ___ / 5

13. Whether the project can be replicated. **A maximum of 10 points is possible.**
Points are determined as follows:
- a. If the project can be commercially replicated on a **regional basis** (for example in the Northeast, Southwest, and so on) **5 points** will be awarded.
 - b. If the project can be commercially replicated **nationally**, **10 points** will be awarded.

Degree to which the project can be replicated
Points awarded: ___ / 10

14. If the project uses a particular technology, system, or process that was not operating at commercial scale as of October 1 of the fiscal year for which the funding is available, **5 points** will be awarded.

Uses a particular non-commercial scale technology
Points awarded: ___ / 5

15. The USDA Rural Business-Cooperative Service Administrator can award up to a **maximum of 10 bonus points**, as follows:
- a. To ensure diversity in the types of projects approved for loan guarantees, and promote as wide a range as possible in the types of technologies, products and approaches supported in the USDA Rural Development Energy Program portfolio.
 - b. To applications that promote partnerships and activities that help develop new and emerging technologies to increase U.S. energy independence, or reduce our dependence on petroleum-based chemicals and products; promote resource conservation, public health, and the environment, diversify agricultural and forestry product markets uses for agriculture waste, and create jobs and enhance the economic development of the rural economy.

These partnerships and other activities are identified in a *Federal Register* notice each fiscal year.

RBCS Administrator
Points awarded: ___ / 10

TOTAL POINTS AWARDED: ___ / 125

Appendix D – Technical Assessment or Report (this is a Phase 2 requirement)

Section 9003
Biorefinery, Renewable Chemical and Biobased
Product Manufacturing Assistance

Fiscal Year 2022 Program Application Guide

Technical Assessment or Technical Report

Reference: 7 CFR Part 4279.261(k)(8) – available at this link: <https://go.usa.gov/xJEeR>

Your technical assessment must be completed by a qualified independent engineer. It must demonstrate that the design, procurement, installation, startup, operation, and maintenance of the project will allow it to perform in a reliable, cost-effective manner.

The assessment also must:

- Determine the useful life of the project
- Identify all necessary project agreements and confirm the agreements will be in place at or before the time of loan closing
- Demonstrate that necessary project equipment and services will be available for the useful life of the project
- Be based on verifiable data, and contain sufficient information and analysis so we can determine the technical feasibility of achieving the levels of income or production projected in your financial statements.

All technical information must follow the format specified in paragraphs 1 – 9 below.

Notes:

- Supporting information can be submitted using other formats.
 - Design drawings and process flow charts must be submitted as exhibits.
 - It is not necessary to submit the information in paragraphs 1 – 9 of this section if the topic is not applicable to your project. However, questions must be answered to our satisfaction before the application will be approved.
 - All projects require the services of an independent, third-party, professional engineer.
1. **Project team qualifications** vary, and are based on the complexity and scale of your project. Your team must:
 - Demonstrate expertise in similar advanced biofuel and biobased products, including renewable chemical, if applicable
 - Be skilled in technology development, engineering, installation, and maintenance
 - Identify borrowers, including any principals with prior experience in bioenergy projects
 - Confirm receipt of any other federal financial assistance, including the date received, amount, purpose, and outcome

- Provide evidence that project team service providers have the necessary professional credentials or relevant experience to perform the required services for the development, construction, or retrofitting of technology for producing advanced biofuels and biobased products, including renewable chemicals, if applicable
- Confirm that any vendors of proprietary components can provide necessary equipment and spare parts for the facility to operate over its useful life

Your application must:

- a. Discuss the proposed project delivery method

Examples include:

- Design-bid-build method, in which a separate engineering firm designs the project and prepares a request for bids, then the successful bidder constructs the project at the borrower's risk
 - Design-build method – often called “turnkey” – in which the borrower establishes project specifications hires a developer to design and build the project at the developer's risk
- b. Identify the manufacturers of major components of advanced biofuels and biobased products, including renewable chemical, if applicable, and describe the technology equipment in terms of length of time in business, and number of units installed at the capacity and scale you are proposing.
 - c. Discuss the project team members' qualifications for engineering, designing, and installing similar projects, including any relevant certifications by recognized organizations. Provide a list of similar projects designed, installed, or supplied and currently operating, and include references.
 - d. Describe the facility operator's qualifications and experience in servicing, operating, and maintaining equipment or similar projects. Provide a list of similar projects designed, installed, or supplied and currently operating, and include references.
2. **Agreements and permits.** Your application must identify all agreements and permits required for your project, and include the schedule for – and status of – securing them.

Elements:

- a. Facilities must be built in accordance with local, state, and national codes, and local, state, and federal regulations.

- b. You must identify all zoning, code and permit requirements, and follow the schedule for meeting them.
 - c. Identify required licenses and the schedule for getting them.
 - d. Identify any land use agreements and terms, and set the schedule for securing them.
 - e. Identify any permits or agreements required for solid, liquid, or gaseous emissions or effluents, and the schedule for securing them.
 - f. Identify available component warranties for the project location and size.
 - g. Identify all environmental issues – including any potential compliance issues – associated with your project.
3. **Resource assessment.** Your application must provide evidence of feedstock availability necessary for the facility to operate as designed.
- Indicate the type and quantity of feedstock
 - Identify feedstock storage options and any competing uses.
 - Describe shipping and receiving methods and the infrastructure necessary to support them, including appropriate transportation mechanisms and methods and systems to prevent the spread of invasive species.
 - For proposed projects with established shipping and receiving resources, provide a summary of those resources.
4. **Design and engineering.** Your application must provide authoritative evidence the facility will be designed and engineered to meet its intended purposes, ensure public safety, and comply with applicable laws, regulations, agreements, permits, codes, and standards. Projects must be engineered as a complete, integrated facility by a qualified engineer. The engineering must be comprehensive, and include site selection, systems and component selection, and systems monitoring equipment. All projects must be constructed by a qualified builder.

Elements:

- a. Your application must include:
 1. A concise, complete description of your project, including location, the type and amount of feedstocks, facility specifications including the type, amount, and quality of the output, and monitoring equipment.
 2. Monthly and annual performance reports describing the uses of – or market for – the advanced biofuels, biobased products, or renewable chemicals, if applicable – produced by the facility. Discuss the potential impacts of reduced or interrupted feedstock availability on the facility’s operations.

- b. Your application also must include:
 1. A description of the project site that addresses site access, foundations, and backup equipment, as applicable
 2. An environmental report or assessment prepared using 7 CFR part 1970, subpart B, Exhibit C (available at this link: <https://go.usa.gov/xJmF5>)
 3. Identification of any unique construction or installation issues.
- c. Sites must be controlled by the eligible borrower for at least the financing term of the loan note guarantee.
5. Project development schedule. Your application must describe each significant task, its beginning and end, and its relationship to the time needed to begin and carry project construction from excavation, through startup and shakedown. Provide a detailed description of the project timeline, including:
 - a. Resource assessments
 - b. Project and site design
 - c. Permits and agreements
 - d. Equipment procurement
6. Equipment procurement. Your application must demonstrate that equipment required by the facility is available and can be bought and delivered within the proposed project development schedule.
 - Projects can be built 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; delivery, ordering, warranties, shipping, receiving, and on-site storage or inventory.
7. Equipment installation. Your application must provide a full description of the plan for – and management of – site development and systems installation. Include:
 - a. Details on scheduling the installation of equipment needed for project construction
 - b. Descriptions of the startup and shakedown specification and process
 - c. Details of the conditions required for startup and shakedown for each equipment item individually – and for the facility as a whole
8. Operations and maintenance. Your application must describe the operations and maintenance requirements necessary for the facility to operate as designed over its useful life. The application must also include:

- a. Information regarding available facility and component warranties, and the availability of spare parts
 - b. A description of the routine operations and maintenance requirements of the proposed facility, including:
 - c. Maintenance schedules for the mechanical, piping, and electrical systems, along with system monitoring and control requirements
 - d. Information that estimates the expected useful life of the facility, and describes the timing of major component replacement or rebuilds
 - e. A discussion of the costs and labor associated with operating and maintaining the facility, addressing any plans for in- or outsourcing, and
 - f. A description of the opportunities for technology transfer for long-term project operations and maintenance by a local owner-operator
 - g. A discussion of the risk management plan for handling large, unanticipated failures of major components
9. **Decommissioning.** Describe your proposed decommissioning process in the event the project must be uninstalled or removed. Include issues, requirements, and anticipated removal and disposal costs.

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