within the proposed project development schedule. Hydropower 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.

(b) 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, barges 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.

(1) 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:

(a) Ensure that systems must have at least a 3-year warranty for equipment. Provide information regarding turbine warranties and availability of spare parts;
(b) Describe the routine operations and maintenance requirements of the proposed project, including maintenance schedules for the mechanical and electrical systems and system monitoring and control requirements;
(c) Provide information that supports expected design life of the system and timing of major component replacement or rebuilds;
(d) Provide and discuss the risk management plan for handling large, 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;
(e) Describe opportunities for technology transfer for long-term project operations and maintenance by a local entity or owner/operator; and
(f) For owner maintained portions of the system, describe any unique knowledge, skills, or abilities needed for service operations or maintenance.

(i) 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.

APPENDIX D TO SUBPART B OF PART 4280—TECHNICAL REPORT FOR FLEXIBLE FUEL PUMPS

The technical requirements specified in this appendix apply to flexible fuel pump projects, as defined in §4280.103.

(a) Qualifications of project team. The flexible fuel pump project team is expected to consist of 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 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 flexible fuel 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 fuel dispensing 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 fuel dispensing 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 schedule and condition for securing those agreements and permits. Identify any unique construction and installation issues. Identify any specified in paragraphs (b)(1) through (b)(8).

(1) Include Underwriters Laboratory certifications for installed flexible fuel pumps.

(2) Identify design and code issues and required permits and the anticipated schedule for securing those requirements and securing those permits.

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

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

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

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

(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 fuels available. Indicate the type, quantity, and quality and the demand for that fuel in its service area.

(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 flexible fuel pump project, including location of the project, resource characteristics, system specifications, electric power system, fire suppression systems, and monitoring equipment. Identify possible vendors and models of major system components. Describe the system capacity, storage tank(s), and dispensing apparatus of the proposed system as rated and as expected in actual field conditions.

(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 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 report that describes the costs and revenues of the proposed project to demonstrate the financial performance of the project (the projected increase in annual net income resulting by the installation of the project) and include the calculation of simple payback. Provide a detailed analysis and description of project costs, including project management, resource assessment, project design, project permitting, equipment, site preparation, system installation, startup and shakedown, warranties, insurance, financing, and 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. Flexible fuel 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.

(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.
Appendix E to Subpart B of Part 4280—Feasibility Study Content

Elements in an acceptable feasibility study include, but are not necessarily limited to, the elements specified in Sections A through G, as applicable, of this Appendix. Both a technical report for the project and an economic analysis of the project are required as part of the feasibility study. The technical report to be provided must conform to that required under Appendix A, B, C, or D of this subpart, as applicable.

Section A. Executive Summary. Provide an introduction and overview of the project. In the overview, describe the nature and scope of the proposed project, including purpose, project location, design features, capacity, and estimated total capital cost. Include a summary of each of the elements of the feasibility study, including:

1. Economic feasibility determinations;
2. Market feasibility determinations;
3. Technical feasibility determinations;
4. Financial feasibility determinations;
5. Management feasibility determinations; and
6. Recommendations for implementation of the proposed project.

Section B. Economic Feasibility. Provide information regarding project site, the availability of trained or trainable labor; and the availability of infrastructure, including utilities, and rail, air, and road service to the site. Discuss feedstock source management, including feedstock collection, pre-treatment, transportation, and storage, and provide estimates of feedstock volumes and costs. Discuss the proposed project’s potential impacts on existing manufacturing plants or other facilities that use similar feedstock if the proposed technology is adopted. Provide projected impacts of the proposed project on resource conservation, public health, and the environment. Provide an overall economic impact of the project including any additional markets created (e.g., for agricultural and forestry products and agricultural waste material) and potential for rural economic development. Provide feasibility/plans of project to work with producer associations or cooperatives including estimated amount of annual feedstock and biofuel and byproduct dollars from producer associations and cooperatives.

Section C. Market Feasibility. Provide information on the sales organization and management. Discuss the nature and extent of market and market area and provide marketing plans for sale of projected output, including both the principal products and the by-products. Discuss the extent of competition including other similar facilities in the market area. Provide projected supply of and projected competitive demand for raw materials. Describe the procurement plan, including projected procurement costs and the form of commitment of raw materials (e.g., marketing agreements, etc.). Identify commitments from customers or brokers for both the principal products and the by-products. Discuss all risks related to the industry, including industry status.

Section D. Technical Feasibility. The technical feasibility report shall be based upon verifiable data and contain sufficient information and analysis so that a determination may be made on the technical feasibility of achieving the levels of income or production that are projected in the financial statements. The project engineer or architect is considered an independent party provided neither the principals of the firm nor any individual of the firm who participates in the technical feasibility report has a financial interest in the project. If no other individual or firm with the expertise necessary to make such a determination is reasonably available to perform the function, an individual or firm that is not independent may be used.

1. Identify any constraints or limitations in the financial projections and any other facility or design-related factors that might affect the success of the enterprise. Identify and estimate project operation and development costs and specify the level of accuracy.