



ALASKA ENERGY AUTHORITY

Economist to Assist in the Review of the Alaska Renewable Energy Fund Applications

RFP 26003

ISSUED July 30, 2025

The Alaska Energy Authority (AEA) is soliciting proposals for one or more consultants to assist AEA in performing economic analysis and reviews of grant applications submitted to AEA in response to AEA's Renewable Energy Fund Request for Applications beginning with Round 18. Additionally, economic and financial analysis may be requested for existing Renewable Energy Funds and/or successful applications on an ongoing basis. We encourage interested firms to submit a proposal.

ISSUED BY:

ALASKA ENERGY AUTHORITY (AEA)

PRIMARY CONTACT:

Selwin C. Ray

CONTRACTING OFFICER

SRAY@AKENERGYAUTHORITY.ORG

(907) 771-3035

OFFERORS ARE NOT REQUIRED TO RETURN THIS FORM

Important Notice: If you downloaded this solicitation from the AEA's Website, you must register on the online Plan Holders list to receive subsequent addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that they have received all addenda affecting this RFP. To register, go to <https://www.aideaaeaprocurement.org/> and provide the project name & number, company name & contact person, address, phone number & fax number.

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SECTION 1. INTRODUCTION & INSTRUCTIONS

SEC. 1.01 PURPOSE OF THE RFP

The Alaska Energy Authority (“AEA” or “Authority”) is soliciting proposals for one or more consultants to assist AEA in performing economic analysis and reviews of grant applications submitted to AEA in response to the Renewable Energy Fund (REF) Request for Applications beginning with Round 18. Additionally, economic and financial analysis may be requested for existing REF projects and/or successful applications on an ongoing basis. We encourage interested firms to submit a proposal.

AEA may require face-to-face meetings with the economist(s), and therefore it is desired that the firms be located in or near Anchorage.

Offerors should anticipate work for Round 18 from approximately early October 2025 through June 30, 2026; with the concentration of work occurring from October 6, 2025 through January 30, 2026. Work associated with subsequent REF Rounds, if released by the Authority, is anticipated to occur from September through January of the following year. AEA may require additional assistance in responding to legislative questions. The amount of work is dependent upon on the number and complexity of applications received.

AEA may contract for similar services from other Contractors during the term of the agreement.

The Contractor shall be excluded from reviewing applications where in the judgment of the Authority there is an appearance or actual conflict of interest.

SEC. 1.02 BUDGET

AEA estimates an annual budget of \$125,000.00 dollars for completion of the attached scope of work and any additional Notices to Proceed. Proposals priced at more than **\$375,000.00** will be considered non-responsive.

AEA makes no guarantee as to any minimum amounts of work that may occur and may choose to do a portion of the work with its own staff or other Contractors if it is determined to be in the best interests of AEA.

Payment for the first year of the contract is subject to funds already appropriated and identified. Funds for future years are dependent on future appropriations by the Alaska State Legislature and are not guaranteed.

This RFP is a State Funded project.

SEC. 1.03 DEADLINE FOR RECEIPT OF PROPOSALS

Proposals must be received no later than **2:00 PM** prevailing Alaska Time on **August 29, 2025**. Faxed proposals are not acceptable.

Late proposals or amendments will be disqualified and not opened or accepted for evaluation.

SEC. 1.04 PRIOR EXPERIENCE

In order for offers to be considered responsive offerors must meet these minimum prior experience requirements: Offerors are to provide minimum prior experience under “Relevant Experience and Qualifications”.

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1. A minimum of three (3) years demonstrated economist experience;
2. Offerors must provide three (3) examples highlighting their experience in evaluating energy projects in Alaska to determine if they are economically viable and financially feasible; and
3. Offerors must provide three (3) examples highlighting their experience working with engineers and other professionals in an evaluation process.

An offeror's failure to meet these minimum prior experience requirements may cause their proposal to be considered non-responsive and their proposal may be rejected.

SEC. 1.05 REQUIRED REVIEW

Offerors should carefully review this solicitation for defects and questionable or objectionable material. Comments concerning defects and objectionable material must be made in writing and received by the contracting officer at least ten days before the deadline for receipt of proposals. This will allow time for the issuance of any necessary amendments. It will also help prevent the opening of a defective solicitation and exposure of offeror's proposals upon which award could not be made. Protests based on any omission or error, or on the content of the solicitation, will be disallowed if these faults have not been brought to the attention of the contracting officer, in writing, at least ten days before the deadline for receipt of proposals.

SEC. 1.06 QUESTIONS PRIOR TO DEADLINE FOR RECEIPT OF PROPOSALS

All questions must be in writing and directed to the contracting officer. The interested party must confirm telephone conversations in writing.

Two types of questions generally arise. One may be answered by directing the questioner to a specific section of the RFP. These questions may be answered over the telephone. Other questions may be more complex and may require a written amendment to the RFP. The contracting officer will make that decision. **No further question will be allowed after August 20, 2025 at 1:30 PM Alaska prevailing time.**

CONTRACTING OFFICER: Selwin C. Ray – PHONE 907-771-3035 - FAX 907-771-3044

SEC. 1.07 RETURN INSTRUCTIONS

Emailed proposals are to be sent to AEAPROUREMENT@AKENERGYAUTHORITY.ORG and include the project number and name in the subject line with one PDF attachment of the proposal response and one PDF attachment of the cost proposal. To submit proposals by mail or in person, include one hard copy and one copy provided via electronic file on a flash drive of the proposal to the contracting officer in a sealed package. The cost proposal included with the package must be sealed separately from the rest of the proposal and must be clearly identified. The sealed proposal package(s) must be addressed as follows:

Alaska Energy Authority
Attention: Selwin C. Ray
Request for Proposal (RFP) Number: **26003**
RFP Title: **ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA**

RENEWABLE ENERGY FUND APPLICATIONS

813 West Northern Lights Blvd.
Anchorage, AK 99503

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
RENEWABLE ENERGY FUND APPLICATIONS**

If using U.S. mail, please use the following address:

813 West Northern Lights Blvd.
Anchorage, AK 99503

If using a delivery service, please use the following address:

813 West Northern Lights Blvd.
Anchorage, AK 99503

SEC. 1.08 PROPOSAL CONTENTS

The following information must be included in all proposals.

(a) AUTHORIZED SIGNATURE

All proposals must be signed by an individual authorized to bind the offeror to the provisions of the RFP. Proposals must remain open and valid for at least 90-days from the date set as the deadline for receipt of proposals.

(b) OFFEROR'S CERTIFICATION

By signature on the proposal, offerors certify that they comply with the following:

- A. the laws of the State of Alaska;
- B. the applicable portion of the Federal Civil Rights Act of 1964;
- C. the Equal Employment Opportunity Act and the regulations issued there under by the federal government;
- D. the Americans with Disabilities Act of 1990 and the regulations issued there under by the federal government;
- E. all terms and conditions set out in this RFP;
- F. a condition that the proposal submitted was independently arrived at, without collusion, under penalty of perjury;
- G. that the offers will remain open and valid for at least 90 days; and
- H. that programs, services, and activities provided to the general public under the resulting contract conform with the Americans with Disabilities Act of 1990, and the regulations issued there under by the federal government.

If any offeror fails to comply with [a] through [h] of this paragraph, the Authority reserves the right to disregard the proposal, terminate the contract, or consider the contractor in default.

(c) VENDOR TAX ID

A valid Vendor Tax ID must be submitted to the issuing office with the proposal or within five days of the Authority's request.

(d) CONFLICT OF INTEREST

Each proposal shall include a statement indicating whether or not the firm or any individuals working on the contract has a possible conflict of interest (e.g., currently employed by the State of Alaska or formerly employed by the State of Alaska within the past two years) and, if so, the nature of that conflict. The Executive Director of Alaska Energy Authority reserves the right to **consider a proposal non-responsive and reject it or** cancel the award if any interest disclosed from any source could either give the appearance of a conflict or cause speculation as to the objectivity of the program to be developed by the offeror. The Executive Director's determination regarding any questions of conflict of interest shall be final.

(e) FEDERAL REQUIREMENTS

The offeror must identify all known federal requirements that apply to the proposal, the evaluation, or the contract.

(f) BID BOND - PERFORMANCE BOND - SURETY DEPOSIT

Bid Bond

Not Applicable.

Performance Bond

Not Applicable.

Surety Deposit

Not Applicable.

SEC. 1.09 ASSISTANCE TO OFFERORS WITH A DISABILITY

Offerors with a disability may receive accommodation regarding the means of communicating this RFP or participating in the procurement process. For more information, contact the contracting officer no later than seven days prior to the deadline for receipt of proposals.

SEC. 1.10 AMENDMENTS TO PROPOSALS

Amendments to or withdrawals of proposals will only be allowed if acceptable requests are received prior to the deadline that is set for receipt of proposals. No amendments or withdrawals will be accepted after the deadline unless they are in response to the Authority's request in accordance with 2 AAC 12.290.

SEC. 1.11 AMENDMENTS TO THE RFP

If an amendment is issued, it will be provided to those who have registered with the AEA website at <https://www.aideaaeaprocurement.org/>.

SEC. 1.12 RFP SCHEDULE

The RFP schedule set out herein represents the State of Alaska's best estimate of the schedule that will be followed. If a component of this schedule, such as the deadline for receipt of proposals, is delayed, the rest of the schedule may be shifted by the same number of days.

- Issue RFP **July 30, 2025,**
- Pre-proposal conference on **August 8, 2025**
- Deadline for Questions **August 20, 2025**
- Deadline for Receipt of Proposals **August 29, 2025**
- Proposal Evaluation Committee complete evaluation by **September 15, 2025**
- Alaska Energy Authority issues Notice of Intent to Award a Contract **September 22, 2025,**
- Alaska Energy Authority issues contract **October 6, 2025**
- Contract start **October 6, 2025**

This RFP does not, by itself, obligate the Authority. The Authority's obligation will commence when the contract is approved by the Executive Director of Alaska Energy Authority, or the Executive Director's designee. Upon written notice to the contractor, the Authority may set a different starting date for the contract. The Authority will not be responsible for any work done by the contractor, even work done in good faith, if it occurs prior to the contract start date set by the Authority.

SEC. 1.13 PRE-PROPOSAL CONFERENCE

A non-mandatory pre-proposal conference is scheduled for August 8, 2025, at 10:00 AM.

Potential offerors may attend telephonically by calling 1-888-585-9008, when prompted enter 554-684-036#. Please note the call-in has a limited number of participants so if more than one person from companies are attending telephonically, we respectfully request you call in from a conference room speaker phone and have all people together. If calling in, please be respectful of other callers and call from a phone that can be muted so as to cancel out background noise and the possibility of feedback. Contact the Contracting Officer, if you have any additional questions.

SEC. 1.14 ALTERNATE PROPOSALS

Offerors may only submit one proposal for evaluation.

In accordance with 2 AAC 12.830 alternate proposals (proposals that offer something different than what is asked for) will be rejected.

SEC. 1.15 NEWS RELEASES

News releases related to this RFP will not be made without prior approval of the project director.

SECTION 2. BACKGROUND INFORMATION

SEC. 2.01 BACKGROUND INFORMATION

Funding from the Renewable Energy (RE) Grant Fund has made grants available for supporting alternative energy projects in Alaska. AEA requires assistance in determining which projects are economically viable and should be recommended to the legislature for funding. To learn more about AEA and its programs, go to the AEA website at <http://www.akenergyauthority.org>.

It is unknown how many applications AEA will receive. In previous rounds, AEA has received between 21 and 130 applications.

SEC. 2.02 SCOPE OF WORK

The purpose of this RFP is to contract with a Consultant(s) to provide the following tasks:

- 1) Conduct economic assessments of grant applications and analyze their economic feasibility as projects proposed under the Renewable Energy Grant fund. For more Information regarding the Renewable Energy Fund, go to 2025 REF Application (akenergyauthority.org). Contract economists will utilize fuel price projections and models developed for REF Round 18 , projections and models may be updated on an annual basis.
- 2) Participate in meetings, and the evaluation and ranking of the proposed grant responses with a team of AEA staff and other consultants and provide recommendations based on established criteria.
- 3) Conduct peer review of other economists' work.
- 4) Be available to perform follow-up work as needed during the legislative phase of the grant program.
- 5) Consultants for example, may be asked to assist in proposal technical reviews in the areas of biomass, geothermal, hydroelectric, ocean and river energy, solar, wind, energy storage, and heat recovery.

SEC. 2.03 CONTRACT TERM AND WORK SCHEDULE

The length of the contract will be from the date of award, approximately October 6, 2025, through June 30, 2028, with two (2) optional one (1)-year renewal options upon mutual agreement between the Authority and the Offeror/Contractor; yielding a maximum contract end-date of June 30, 2030. Unless otherwise provided in this RFP, the Authority and the successful offeror/contractor agree: (1) that any holding over of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions shall remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least 30 days before the desired date of cancellation.

SEC. 2.04 NOTICE TO PROCEED

The Contractor shall provide services as identified and authorized by sequentially numbered Notices to Proceed(NTPs). The Contractor shall not perform services or incur billable expense except as authorized by a NTP.

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The Contractor shall be responsible for all tasks and services authorized by a NTP signed by the Project Manager and shall perform such services in accordance with the project schedule.

A Notice to Proceed by itself cannot authorize any work and is not a binding contract. A Notice to Proceed can only be issued and authorized if there is a fully signed Term Agreement in place with the Contractor.

The Notice to Proceed must include a Statement of Services with tasks, measurable deliverables, and delivery schedule identified. The Statement of Services, delivery schedule, and costs will be negotiated between the Contracting Agency and Contractor for inclusion in the Notice to Proceed.

After project assignment and preliminary project/Statement of Services discussions between Contractor and Agency have been held, Contractor shall submit a proposed delivery schedule and Summary of Estimate for Services that identifies:

- a) the assigned staff and hours per task;
- b) a breakdown of staff hours per applicable task for each subcontractor; and
- c) a breakdown with documentation (estimates from vendors shall be provided upon request) to support direct non-labor expenses.

The hourly rates used for the Contractor's estimate must match the hourly rates listed on the cost proposal for the Primary and any subcontractors used (cannot use subcontractors that are not listed in the Contract without amending the Term Agreement).

The Notices to Proceed will incorporate the negotiated compensation for the project and all the terms and conditions listed in the Contract.

The expiration date of the Notice to Proceed may be several months after the last deliverables are due. This allows time for review of deliverables and adding of additional phases of work, if applicable.

The expiration date of the Notice to Proceed must be within the expiration date of the Contract. The total dollar amount of the Notice to Proceed must be within the amount of the Contract.

All Contracts and Notices to Proceed must be in writing and signed by all required approvers before it becomes binding on AEA.

SEC. 2.05 DELIVERABLES

The contractor will be required to provide the following deliverables:

At a minimum, contractors should expect to be able to deliver the following for each REF Round in which the Authority releases a Request for Applications:

- 1) Contractor shall provide annotated workbooks with completed spreadsheet models, which project and compare capital, fuel, operation and maintenance costs for the application assigned with the existing base case alternative.
- 2) Contractor shall provide reports and/or other documents that summarize and describe the results of their analyses for each reviewed project.

SEC. 2.06 CONTRACT TYPE

This contract is a Fixed Hourly Rate contract.

SEC. 2.07 PROPOSED PAYMENT PROCEDURES

The Authority will make payments based on a negotiated payment schedule. Each billing must consist of an invoice and progress report. No payment will be made until the progress report and invoice has been approved by the project director.

SEC. 2.08 CONTRACT PAYMENT

No payment will be made until the contract is approved by the Executive Director of Alaska Energy Authority or the Director's designee. Under no conditions will the Authority be liable for the payment of any interest charges associated with the cost of the contract.

The Authority is not responsible for and will not pay local, state, or federal taxes. All costs associated with the contract must be stated in U.S. currency.

SEC. 2.09 LOCATION OF WORK

The location(s) the work is to be performed, completed and managed at the contractor's place of business.

The Authority **WILL NOT** provide workspace for the contractor. The contractor must provide its own workspace.

The contractor should include in their price proposal: transportation, lodging, and per diem costs sufficient to pay for any travel deemed necessary to complete the scope of work.

Failure to comply with these requirements may cause the Authority to reject the proposal as non-responsive, or cancel the contract.

SEC. 2.10 THIRD-PARTY SERVICE PROVIDERS

Not Applicable.

SEC. 2.11 SUBCONTRACTORS

Subcontractors may be used to perform work under this contract. If an offeror intends to use subcontractors, the offeror must identify in the proposal the names of the subcontractors and the portions of the work the subcontractors will perform.

Subcontractor experience **SHALL NOT** be considered in determining whether the offeror meets the requirements set forth in **SEC. 1.04 PRIOR EXPERIENCE**.

If a proposal with subcontractors is selected, the offeror must provide the following information concerning each prospective subcontractor within five working days from the date of the Authority's request:

- complete name of the subcontractor;
- complete address of the subcontractor;
- type of work the subcontractor will be performing;
- percentage of work the subcontractor will be providing;
- evidence that the subcontractor holds a valid Alaska business license; and

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- a written statement, signed by each proposed subcontractor that clearly verifies that the subcontractor is committed to render the services required by the contract.

An offeror's failure to provide this information, within the time set, may cause the Authority to consider their proposal non-responsive and reject it. The substitution of one subcontractor for another may be made only at the discretion and prior written approval of the project director.

SEC. 2.12 JOINT VENTURES

Joint ventures will not be allowed.

SEC. 2.13 F.O.B. POINT

All goods purchased through this contract will be F.O.B. final destination. Unless specifically stated otherwise, all prices offered must include the delivery costs to any location within the State of Alaska.

SEC. 2.14 CONTRACT PERSONNEL

Any change of the project team members or subcontractors named in the proposal must be approved, in advance and in writing, by the project director. Personnel changes that are not approved by the Authority may be grounds for the Authority to terminate the contract.

**SEC. 2.15 INSPECTION & MODIFICATION - REIMBURSEMENT FOR
UNACCEPTABLE DELIVERABLES**

The contractor is responsible for the completion of all work set out in the contract. All work is subject to inspection, evaluation, and approval by the project director. The Authority may employ all reasonable means to ensure that the work is progressing and being performed in compliance with the contract. The project director may instruct the contractor to make corrections or modifications if needed in order to accomplish the contract's intent. The contractor will not unreasonably withhold such changes.

Substantial failure of the contractor to perform the contract may cause the Authority to terminate the contract. In this event, the Authority may require the contractor to reimburse monies paid (based on the identified portion of unacceptable work received) and may seek associated damages.

SEC. 2.16 LIQUIDATED DAMAGES

Not Applicable.

SEC. 2.17 CONTRACT CHANGES - UNANTICIPATED AMENDMENTS

During the course of this contract, the contractor may be required to perform additional work. That work will be within the general scope of the initial contract. When additional work is required, the project director will provide the contractor a written description of the additional work and request the contractor to submit a firm time schedule for accomplishing the additional work and a firm price for the additional work. Cost and pricing data must be provided to justify the cost of such amendments per AS 36.30.400.

The contractor will not commence additional work until the project director has secured any required Authority approvals necessary for the amendment and issued a written contract amendment, approved by the Executive Director of Alaska Energy Authority or the Director's designee.

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SEC. 2.18 NONDISCLOSURE AND CONFIDENTIALITY

Contractor agrees that all confidential information shall be used only for purposes of providing the deliverables and performing the services specified herein and shall not disseminate or allow dissemination of confidential information except as provided for in this section. The contractor shall hold as confidential and will use reasonable care (including both facility physical security and electronic security) to prevent unauthorized access by, storage, disclosure, publication, dissemination to and/or use by third parties of, the confidential information. “Reasonable care” means compliance by the contractor with all applicable federal and state law, including the Social Security Act and HIPAA. The contractor must promptly notify the Authority in writing if it becomes aware of any storage, disclosure, loss, unauthorized access to or use of the confidential information.

Confidential information, as used herein, means any data, files, software, information or materials (whether prepared by the state or its agents or advisors) in oral, electronic, tangible or intangible form and however stored, compiled or memorialized that is classified confidential as defined by State of Alaska classification and categorization guidelines provided by the Authority to the contractor or a contractor agent or otherwise made available to the contractor or a contractor agent in connection with this contract, or acquired, obtained or learned by the contractor or a contractor agent in the performance of this contract. Examples of confidential information include, but are not limited to: technology infrastructure, architecture, financial data, trade secrets, equipment specifications, user lists, passwords, research data, and technology data (infrastructure, architecture, operating systems, security tools, IP addresses, etc).

If confidential information is requested to be disclosed by the contractor pursuant to a request received by a third party and such disclosure of the confidential information is required under applicable state or federal law, regulation, governmental or regulatory authority, the contractor may disclose the confidential information after providing the Authority with written notice of the requested disclosure (to the extent such notice to the Authority is permitted by applicable law) and giving the Authority opportunity to review the request. If the contractor receives no objection from the Authority, it may release the confidential information within 30 days. Notice of the requested disclosure of confidential information by the contractor must be provided to the Authority within a reasonable time after the contractor’s receipt of notice of the requested disclosure and, upon request of the Authority, shall seek to obtain legal protection from the release of the confidential information.

The following information shall not be considered confidential information: information previously known to be public information when received from the other party; information freely available to the general public; information which now is or hereafter becomes publicly known by other than a breach of confidentiality hereof; or information which is disclosed by a party pursuant to subpoena or other legal process and which as a result becomes lawfully obtainable by the general public.

SEC. 2.19 INSURANCE REQUIREMENTS

The successful offeror must provide proof of workers' compensation insurance prior to contract approval.

The successful offeror must secure the insurance coverage required by the Authority. The coverage must be satisfactory to the Department of Administration Division of Risk Management. An offeror's failure to provide evidence of such insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

Offerors must review form APPENDIX B, attached in SECTION 7. ATTACHMENTS, for details on required coverage. No alteration of these requirements will be permitted without prior written approval from the

Department of Administration, Division of Risk Management. Objections to any of the requirements in APPENDIX B must be set out in the offeror's proposal.

SEC. 2.20 TERMINATION FOR DEFAULT

If the project director determines that the contractor has refused to perform the work or has failed to perform the work with such diligence as to ensure its timely and accurate completion, the Authority may, by providing written notice to the contractor, terminate the contractor's right to proceed with part or all of the remaining work.

This clause does not restrict the Authority 's termination rights under the contract provisions of Appendix A, attached in SECTION 7. ATTACHMENTS.

SECTION 3. PROPOSAL FORMAT AND CONTENT

SEC. 3.01 PROPOSAL FORMAT AND CONTENT

The Authority discourages overly lengthy and costly proposals, however, in order for the Authority to evaluate proposals fairly and completely, offerors must follow the format set out in this RFP and provide all information requested.

SEC. 3.02 INTRODUCTION

Proposals must include the complete name and address of offeror's firm and the name, mailing address, and telephone number of the person the Authority should contact regarding the proposal.

Proposals must confirm that the offeror will comply with all provisions in this RFP; and, if applicable, provide notice that the firm qualifies as an Alaskan bidder. Proposals must be signed by a company officer empowered to bind the company. An offeror's failure to include these items in the proposals may cause the proposal to be determined to be non-responsive and the proposal may be rejected.

SEC. 3.03 UNDERSTANDING AND METHODOLOGY OF THE PROJECT

Offerors must provide comprehensive narrative statements that illustrate their understanding of the requirements of the project and the project schedule.

Offerors must provide comprehensive narrative statements that set out the methodology they intend to employ and illustrate how the methodology will serve to accomplish the work and meet the Authority's project schedule.

SEC. 3.04 MANAGEMENT PLAN AND AVAILABILITY FOR THE PROJECT

Offerors must provide comprehensive narrative statements that set out the management plan they intend to follow and illustrate how the plan will serve to accomplish the work and meet the Authority's project schedule.

SEC. 3.05 EXPERIENCE AND QUALIFICATIONS

Offerors must provide an organizational chart specific to the personnel assigned to accomplish the work called for in this RFP; illustrate the lines of authority; and designate the individual responsible and accountable for the completion of each component and deliverable of the RFP.

Offerors must provide a narrative description of the organization of the project team and a personnel roster that identifies each person who will actually work on the contract and provide the following information about each person listed:

- titles,
- resume,
- location(s) where work will be performed, and
- itemize the total cost and the number of estimated hours for each individual named above.

Offerors must provide reference names and phone numbers for similar projects the offeror's firm has completed.

SEC. 3.06 COST PROPOSAL

Cost proposals must include fixed hourly rates for all employees and sub-contractors that includes all direct and indirect costs associated with the performance of the contract, including, but not limited to, direct expenses, payroll, supplies, overhead assigned to each person working on the project, percentage of each person's time devoted to the project, and profit. Proposed billable hourly rates become a part of the contract(s) awarded resulting from this solicitation.

Since the number and complexity of applications that AEA will receive through the Renewable Energy Fund Request for Applications is unknown, AEA is providing a representative application (attached to this RFP) to base the estimated number of hours to produce the required deliverables for a single application. Please use this application to estimate a unit cost for evaluating applications. The application unit cost should include the hourly rate of each project team member, the tasks to be performed as outlined in the Scope of Work and the offeror's management plan, and the number of hours required by each team member per task.

SEC. 3.07 EVALUATION CRITERIA

All proposals will be reviewed to determine if they are responsive. Proposals determined to be responsive will be evaluated using the criterion that is set out in Section 4. EVALUATION CRITERIA AND CONTRACTOR SELECTION.

An evaluation may not be based on discrimination due to the race, religion, color, national origin, sex, age, marital status, pregnancy, parenthood, disability, or political affiliation of the offeror.

SECTION 4. EVALUATION CRITERIA AND CONTRACTOR SELECTION

THE TOTAL NUMBER OF POINTS USED TO SCORE THIS PROPOSAL IS 100

SEC. 4.01 UNDERSTANDING AND METHODOLOGY OF THE PROJECT (20%)

Proposals will be evaluated against the questions set out below:

- 1) How well has the offeror demonstrated a thorough understanding of the purpose and scope of the project?
- 2) How well has the offeror identified pertinent issues and potential problems related to the project?
- 3) To what degree has the offeror demonstrated an understanding of the deliverables the Authority expects it to provide?
- 4) How comprehensive is the methodology and does it depict a logical approach to fulfilling the requirements of the RFP?
- 5) How well does the methodology match and achieve the objectives set out in the RFP?
- 6) Does the methodology interface with the time schedule in the RFP?

SEC. 4.02 MANAGEMENT PLAN AND AVAILABILITY FOR THE PROJECT (10%)

Proposals will be evaluated against the questions set out below:

- 1) How well does the management plan support all of the project requirements and logically lead to the deliverables required in the RFP?
- 2) How well is accountability completely and clearly defined?
- 3) Is the organization of the project team clear?
- 4) How well does the management plan illustrate the lines of authority and communication?
- 5) To what extent does the offeror already have the hardware, software, equipment, and licenses necessary to perform the contract?
- 6) Has the offeror demonstrated an understanding of the Authority's time schedule and can meet it?
- 7) Has the offeror gone beyond the minimum tasks necessary to meet the objectives of the RFP?
- 8) To what degree is the proposal practical and feasible?
- 9) To what extent has the offeror identified potential problems?

SEC. 4.03 EXPERIENCE AND QUALIFICATIONS (20%)

Proposals will be evaluated against the questions set out below:

1) Questions regarding the personnel:

- a) Do the individuals assigned to the project have experience on similar projects?
- b) Are resumes complete and do they demonstrate backgrounds that would be desirable for individuals engaged in the work the project requires?
- c) How extensive is the applicable education and experience of the personnel designated to work on the project?

2) Questions regarding the firm and subcontractor (if used):

- a) How well has the firm demonstrated experience in completing similar projects on time and within budget?
- b) How successful is the general history of the firm regarding timely and successful completion of projects?
- c) Has the firm provided letters of reference from previous clients?
- d) If a subcontractor will perform work on the contract, how well do they measure up to the evaluation used for the offeror?

SEC. 4.04 CONTRACT COST (40%)

Overall, a minimum of **40%** of the total evaluation points will be assigned to cost. The cost amount used for evaluation may be affected by one or more of the preferences referenced under Section 5.12.

Converting Cost to Points

The lowest cost proposal will receive the maximum number of points allocated to cost. The point allocations for cost on the other proposals will be determined through the method set out in Section 5.15.

SEC. 4.05 ALASKA OFFEROR PREFERENCE (10%)

If an offeror qualifies for the Alaska Bidder Preference, the offeror will receive an Alaska Offeror Preference. The preference will be 10% of the total available points. This amount will be added to the overall evaluation score of each Alaskan offeror.

SECTION 5. GENERAL PROCESS INFORMATION

SEC. 5.01 INFORMAL DEBRIEFING

When the contract is completed, an informal debriefing may be performed at the discretion of the project director. If performed, the scope of the debriefing will be limited to the work performed by the contractor.

SEC. 5.02 ALASKA BUSINESS LICENSE AND OTHER REQUIRED LICENSES

Prior to the award of a contract, an offeror must hold a valid Alaska business license. However, in order to receive the Alaska Bidder Preference and other related preferences, such as the Alaska Veteran and Alaska Offeror Preference, an offeror must hold a valid Alaska business license prior to the deadline for receipt of proposals. Offerors should contact the **Department of Commerce, Community and Economic Development, Division of Corporations, Business, and Professional Licensing, PO Box 110806, Juneau, Alaska 99811-0806**, for information on these licenses. Acceptable evidence that the offeror possesses a valid Alaska business license may consist of any one of the following:

- copy of an Alaska business license;
- certification on the proposal that the offeror has a valid Alaska business license and has included the license number in the proposal;
- a canceled check for the Alaska business license fee;
- a copy of the Alaska business license application with a receipt stamp from the Authority's occupational licensing office; or
- a sworn and notarized statement that the offeror has applied and paid for the Alaska business license.

You are not required to hold a valid Alaska business license at the time proposals are opened if you possess one of the following licenses and are offering services or supplies under that specific line of business:

- fisheries business licenses issued by Alaska Department of Revenue or Alaska Department of Fish and Game;
- liquor licenses issued by Alaska Department of Revenue for alcohol sales only;
- insurance licenses issued by Alaska Department of Commerce, Community and Economic Development, Division of Insurance; or,
- mining licenses issued by Alaska Department of Revenue.

Prior the deadline for receipt of proposals, all offerors must hold any other necessary applicable professional licenses required by Alaska Statute.

SEC. 5.03 SITE INSPECTION

The Authority may conduct on-site visits to evaluate the offeror's capacity to perform the contract. An offeror must agree, at risk of being found non-responsive and having its proposal rejected, to provide the Authority reasonable access to relevant portions of its work sites. Individuals designated by the contracting officer at the Authority's expense will make site inspection.

SEC. 5.04 CLARIFICATION OF OFFERS

In order to determine if a proposal is reasonably susceptible for award, communications by the contracting officer or the proposal evaluation committee (PEC) are permitted with an offeror to clarify uncertainties or eliminate confusion concerning the contents of a proposal. Clarifications may not result in a material or substantive change to the proposal. The evaluation by the contracting officer or the PEC may be adjusted as a result of a clarification under this section.

SEC. 5.05 DISCUSSIONS WITH OFFERORS

The Authority may conduct discussions with offerors in accordance with AS 36.30.240 and 2 AAC 12.290. The purpose of these discussions will be to ensure full understanding of the requirements of the RFP and proposal. Discussions will be limited to specific sections of the RFP or proposal identified by the contracting officer.

Discussions will only be held with offerors who have submitted a proposal deemed reasonably susceptible for award by the contracting officer. Discussions, if held, will be after initial evaluation of proposals by the contracting officer or the PEC. If modifications are made as a result of these discussions they will be put in writing. Following discussions, the contracting officer may set a time for best and final proposal submissions from those offerors with whom discussions were held. Proposals may be reevaluated after receipt of best and final proposal submissions.

If an offeror does not submit a best and final proposal or a notice of withdrawal, the offeror's immediate previous proposal is considered the offeror's best and final proposal.

Offerors with a disability needing accommodation should contact the contracting officer prior to the date set for discussions so that reasonable accommodation can be made. Any oral modification of a proposal must be reduced to writing by the offeror.

SEC. 5.06 EVALUATION OF PROPOSALS

The contracting officer, or an evaluation committee made up of at least three state employees or public officials, will evaluate proposals. The evaluation will be based solely on the evaluation factors set out in SECTION 4. EVALUATION CRITERIA AND CONTRACTOR SELECTION.

After receipt of proposals, if there is a need for any substantial clarification or material change in the RFP, an amendment will be issued. The amendment will incorporate the clarification or change, and a new date and time established for new or amended proposals. Evaluations may be adjusted as a result of receiving new or amended proposals.

SEC. 5.07 CONTRACT NEGOTIATION

After final evaluation, it is anticipated that the contracting officer may conduct negotiations with the offerors of the highest-ranked proposals. Negotiations, if held, shall be within the scope of the request for proposals and limited to those items which would not have an effect on the ranking of proposals. If the highest-ranked offeror fails to provide necessary information for negotiations in a timely manner, or fails to negotiate in good faith, the Authority may terminate negotiations and negotiate with the offeror of the next highest ranked proposal. If contract negotiations are commenced, they may be held in Anchorage, Alaska. Multiple awards may be issued owing to offeror capacity constraints and/or willingness or ability of offerors to evaluate applications concerning specific technologies.

If the contract negotiations take place in Anchorage, Alaska, the offeror will be responsible for their travel and

per diem expenses.

SEC. 5.08 FAILURE TO NEGOTIATE

If the selected offeror

- fails to provide the information required to begin negotiations in a timely manner; or
- fails to negotiate in good faith; or
- indicates they cannot perform the contract within the budgeted funds available for the project; or
- if the offeror and the Authority, after a good faith effort, simply cannot come to terms,

the Authority may terminate negotiations with the offeror initially selected and commence negotiations with the next highest ranked offeror.

SEC. 5.09 OFFEROR NOTIFICATION OF SELECTION

After the completion of contract negotiation the contracting officer will issue a written Notice of Intent to Award (NIA) and send copies to all offerors. The NIA will set out the names of all offerors and identify the proposal(s) selected for award.

SEC. 5.10 PROTEST

AS 36.30.560 provides that an interested party may protest the content of the RFP.

An interested party is defined in 2 AAC 12.990(a) (7) as "an actual or prospective bidder or offeror whose economic interest might be affected substantially and directly by the issuance of a contract solicitation, the award of a contract, or the failure to award a contract."

If an interested party wishes to protest the content of a solicitation, the protest must be received, in writing, by the contracting officer at least ten days prior to the deadline for receipt of proposals.

AS 36.30.560 also provides that an interested party may protest the award of a contract or the proposed award of a contract.

If an offeror wishes to protest the award of a contract or the proposed award of a contract, the protest must be received, in writing, by the contracting officer within five days after the date the Notice of Intent to Award the contract is issued.

A protester must have submitted a proposal in order to have sufficient standing to protest the proposed award of a contract. Protests must include the following information:

- the name, address, and telephone number of the protester;
- the signature of the protester or the protester's representative;
- identification of the contracting agency and the solicitation or contract at issue; and
- a detailed statement of the legal and factual grounds of the protest including copies of relevant documents; and the form of relief requested.

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Protests filed by telex or telegram are not acceptable because they do not contain a signature. Fax copies containing a signature are acceptable.

The contracting officer will issue a written response to the protest. The response will set out the contracting officer's decision and contain the basis of the decision within the statutory time limit in AS 36.30.580. A copy of the decision will be furnished to the protester by certified mail, fax or another method that provides evidence of receipt

All offerors will be notified of any protest. The review of protests, decisions of the contracting officer, appeals, and hearings, will be conducted in accordance with the State Procurement Code (AS 36.30), Article 8 "Legal and Contractual Remedies."

SEC. 5.11 APPLICATION OF PREFERENCES

Certain preferences apply to all contracts for professional services, regardless of their dollar value. The Alaska Bidder, Alaska Veteran, and Alaska Offeror preferences are the most common preferences involved in the RFP process. Additional preferences that may apply to this procurement are listed below. Guides that contain excerpts from the relevant statutes and codes, explain when the preferences apply and provide examples of how to calculate the preferences are available at the **Department of Administration, Division of General Service's** web site:

<http://doa.alaska.gov/dgs/pdf/pref1.pdf>

- Alaska Products Preference - AS 36.30.332
- Recycled Products Preference - AS 36.30.337
- Local Agriculture and Fisheries Products Preference - AS 36.15.050
- Employment Program Preference - AS 36.30.321(b)
- Alaskans with Disabilities Preference - AS 36.30.321(d)
- Alaska Veteran's Preference - AS 36.30.321(f)

The Division of Vocational Rehabilitation in the Department of Labor and Workforce Development keeps a list of qualified employment programs and individuals who qualify as persons with a disability. As evidence of a business's or an individual's right to the Employment Program or Alaskans with Disabilities preferences, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of these preferences, a business or individual must be on the appropriate Division of Vocational Rehabilitation list prior to the time designated for receipt of proposals. Offerors must attach a copy of their certification letter to the proposal.

An offeror's failure to provide this certification letter with their proposal will cause the Authority to disallow the preference.

Sec. 5.12 ALASKA BIDDER PREFERENCE

An Alaska Bidder Preference of 5% will be applied to the price in the proposal. The preference will be given to an offeror who:

- 1) holds a current Alaska business license prior to the deadline for receipt of proposals;
- 2) submits a proposal for goods or services under the name appearing on the offeror's current Alaska business license;

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-
- 3) has maintained a place of business within the state staffed by the offeror, or an employee of the offeror, for a period of six months immediately preceding the date of the proposal;
 - 4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company (LLC) organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.06 or AS 32.11 and all partners are residents of the state; and
 - 5) if a joint venture, is composed entirely of ventures that qualify under (1)-(4) of this subsection.

Alaska Bidder Preference Statement

In order to receive the Alaska Bidder Preference, the proposal must include a statement certifying that the offeror is eligible to receive the Alaska Bidder Preference.

If the offeror is a LLC or partnership as identified in (4) of this subsection, the statement must also identify each member or partner and include a statement certifying that all members or partners are residents of the state.

If the offeror is a joint venture which includes a LLC or partnership as identified in (4) of this subsection, the statement must also identify each member or partner of each LLC or partnership that is included in the joint venture and include a statement certifying that all of those members or partners are residents of the state.

SEC. 5.13 ALASKA VETERAN PREFERENCE

An Alaska Veteran Preference of 5%, not to exceed \$5,000, will be applied to the price in the proposal. The preference will be given to an offeror who qualifies under AS 36.30.990(2) as an Alaska bidder and is a:

- A. sole proprietorship owned by an Alaska veteran;
- B. partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans;
- C. limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or
- D. corporation that is wholly owned by individuals, and a majority of the individuals are Alaska veterans.

Alaska Veteran Preference Statement

In order to receive the Alaska Veteran Preference, the proposal must include a statement certifying that the offeror is eligible to receive the Alaska Veteran Preference.

SEC. 5.14 ALASKA OFFEROR PREFERENCE

2 AAC 12.260(e) provides Alaska offerors at least a 10% overall evaluation point preference. Alaska bidders, as defined in AS 36.30.990(2), are eligible for the preference. An Alaska offeror will receive 10 percent of the total available points added to their overall evaluation score as a preference.

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SEC. 5.15 FORMULA USED TO CONVERT COST TO POINTS

The distribution of points based on cost will be determined as set out in 2 AAC 12.260(c). The lowest cost proposal will receive the maximum number of points allocated to cost. The point allocations for cost on the other proposals will be determined using the formula:

$$[(\text{Price of Lowest Cost Proposal}) \times (\text{Maximum Points for Cost})] \div (\text{Cost of Each Higher Priced Proposal})$$

SEC. 5.16 EXAMPLES: CONVERTING COST TO POINTS & APPLYING PREFERENCES**(a) FORMULA USED TO CONVERT COST TO POINTS****STEP 1**

List all proposal prices, adjusted where appropriate by the application of applicable preferences claimed by the offeror.

Offeror #1 \$40,000

Offeror #2 \$42,750

Offeror #3 \$47,500

STEP 2

In this example, the RFP allotted 40% of the available 100 points to cost. This means that the lowest cost will receive the maximum number of points.

Offeror #1 receives 40 points.

The reason they receive that amount is because the lowest cost proposal, in this case \$40,000, receives the maximum number of points allocated to cost, 40 points.

Offeror #2 receives 37.4 points.

$$\$40,000 \text{ lowest cost} \times 40 \text{ maximum points for cost} = 1,600,000 \div \$42,750 \text{ cost of Offeror \#2's proposal} = 37.4$$

Offeror #3 receives 33.7 points.

$$\$40,000 \text{ lowest cost} \times 40 \text{ maximum points for cost} = 1,600,000 \div \$47,500 \text{ cost of Offeror \#3's proposal} = 33.7$$

(b) ALASKA OFFEROR PREFERENCE**STEP 1**

Determine the number of points available to qualifying offerors under this preference.

$$100 \text{ Total Points Available in RFP} \times 10\% \text{ Alaska offerors preference} = 10 \text{ Points for the Preference}$$

STEP 2

Determine which offerors qualify as Alaska bidders and thus, are eligible for the Alaska offerors preference. For the purpose of this example, presume that all of the proposals have been completely evaluated based on the evaluation criteria in the RFP. The scores at this point are:

Offeror #1	83 points	No Preference	0 points
Offeror #2	74 points	Alaska Offerors Preference	10 points

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Offeror #3	80 points	Alaska Offerors Preference	10 points
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STEP 3

Add the applicable Alaska offerors preference amounts to the offeror's scores:

Offeror #1	83 points	
Offeror #2	84 points	(74 points + 10 points)
Offeror #3	90 points	(80 points + 10 points)

STEP 4

Offeror #3 is the highest scoring offeror and would get the award(s), provided their proposal is responsible and responsive. Please note that it is anticipated that there will be multiple awards to account for offeror's capacity constraints and/or the willingness of the offerors to evaluate certain technology types.

SECTION 6. GENERAL LEGAL INFORMATION

SEC. 6.01 STANDARD CONTRACT PROVISIONS

The contractor will be required to sign and submit the Authority's Standard Agreement Form for Professional Services Contracts (form 02-093/Appendix A). This form is attached in SECTION 7. ATTACHMENTS for your review. The contractor must comply with the contract provisions set out in this attachment. No alteration of these provisions will be permitted without prior written approval from the Department of Law. Objections to any of the provisions in Appendix A must be set out in the offeror's proposal.

SEC. 6.02 PROPOSAL AS A PART OF THE CONTRACT

Part or all of this RFP and the successful proposal may be incorporated into the contract.

SEC. 6.03 ADDITIONAL TERMS AND CONDITIONS

The Authority reserves the right to add terms and conditions during contract negotiations. These terms and conditions will be within the scope of the RFP and will not affect the proposal evaluations.

SEC. 6.04 HUMAN TRAFFICKING

By signature on their proposal, the offeror certifies that the offeror is not established and headquartered or incorporated and headquartered in a country recognized as Tier 3 in the most recent United States Department of Authority's Trafficking in Persons Report.

The most recent United States Department of State's Trafficking in Persons Report can be found at the following website: <http://www.state.gov/j/tip/>

Failure to comply with this requirement will cause the Authority to reject the proposal as non-responsive, or cancel the contract.

SEC. 6.05 RIGHT OF REJECTION

Offerors must comply with all of the terms of the RFP, the State Procurement Code (AS 36.30), and all applicable local, state, and federal laws, codes, and regulations. The contracting officer may reject any proposal that does not comply with all of the material and substantial terms, conditions, and performance requirements of the RFP.

Offerors may not qualify the proposal nor restrict the rights of the Authority. If an offeror does so, the contracting officer may determine the proposal to be a non-responsive counter-offer and the proposal may be rejected.

Minor informalities that:

- do not affect responsiveness;
- are merely a matter of form or format;
- do not change the relative standing or otherwise prejudice other offers;
- do not change the meaning or scope of the RFP;
- are trivial, negligible, or immaterial in nature;
- do not reflect a material change in the work; or

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-
- do not constitute a substantial reservation against a requirement or provision; may be waived by the contracting officer.

The Authority reserves the right to refrain from making an award if it determines that to be in its best interest.

A proposal from a debarred or suspended offeror shall be rejected.

SEC. 6.06 AUTHORITY NOT RESPONSIBLE FOR PREPARATION COSTS

The Authority will not pay any cost associated with the preparation, submittal, presentation, or evaluation of any proposal.

SEC. 6.07 DISCLOSURE OF PROPOSAL CONTENTS

All proposals and other material submitted become the property of the Authority and may be returned only at the Authority's option. AS 40.25.110 requires public records to be open to reasonable inspection. All proposal information, including detailed price and cost information, will be held in confidence during the evaluation process and prior to the time a Notice of Intent to Award is issued. Thereafter, proposals will become public information.

Trade secrets and other proprietary data contained in proposals may be held confidential if the offeror requests, in writing, that the contracting officer does so, and if the contracting officer agrees, in writing, to do so. The offeror's request must be included with the proposal, must clearly identify the information they wish to be held confidential, and include a statement that sets out the reasons for confidentiality. Unless the contracting officer agrees in writing to hold the requested information confidential, that information will also become public after the Notice of Intent to Award is issued.

SEC. 6.08 ASSIGNMENT

Per 2 AAC 12.480, the contractor may not transfer or assign any portion of the contract without prior written approval from the contracting officer.

SEC. 6.09 DISPUTES

A contract resulting from this RFP is governed by the laws of the State of Alaska. If the contractor has a claim arising in connection with the agreement that it cannot resolve with the Authority by mutual agreement, it shall pursue the claim, if at all, in accordance with the provisions of AS 36.30.620 – AS 36.30.632. To the extent not otherwise governed by the preceding, the claim shall be brought only in the Superior Court of the State of Alaska and not elsewhere.

SEC. 6.10 SEVERABILITY

If any provision of the contract or agreement is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions will not be affected; and, the rights and obligations of the parties will be construed and enforced as if the contract did not contain the particular provision held to be invalid.

SEC. 6.11 SUPPLEMENTAL TERMS AND CONDITIONS

Proposals must comply with **SEC. 6.05 RIGHT OF REJECTION**. However, if the Authority fails to identify or detects supplemental terms or conditions that conflict with those contained in this RFP or that diminish the Authority's rights under any contract resulting from the RFP, the term(s) or condition(s) will be considered null and void.

After award of contract:

if conflict arises between a supplemental term or condition included in the proposal and a term or condition of the RFP, the term or condition of the RFP will prevail; and

if the Authority 's rights would be diminished as a result of application of a supplemental term or condition included in the proposal, the supplemental term or condition will be considered null and void.

SEC. 6.12 CONTRACT INVALIDATION

If any provision of this contract is found to be invalid, such invalidation will not be construed to invalidate the entire contract.

SEC. 6.13 SOLICITATION ADVERTISING

Public notice has been provided in accordance with 2 AAC 12.220.

SECTION 7. ATTACHMENTS

ATTACHMENT 1 – COST PROPOSAL

Note: The purpose of the cost formula is to provide a mechanism for offerors to submit project costs in a manner that AEA can evaluate and score and then use to establish billing rates for the resultant contract. Cost will be evaluated on the Sample Application Cost.

Offerors must provide pricing as outlined below or their proposal will be rejected as non-responsive.

Cost proposals must include fixed hourly rates that includes all direct and indirect costs associated with the performance of the contract, including, but not limited to, total number of hours at various hourly rates, direct expenses, payroll, supplies, overhead assigned to each person working on the project, percentage of each person's time devoted to the project, and profit.

Since the number and complexity of applications that AEA will receive through the Renewable Energy Fund Request for Applications is unknown, AEA is providing a representative application (attached to this RFP) to base the estimated number of hours to produce the required deliverables for a single application. Please use this application to estimate a unit cost for evaluating applications. The application unit cost should include the hourly rate of each project team member, the tasks to be performed as outlined in the Scope of Work and the offeror's management plan, and the number of hours required by each team member per task.

If additional unanticipated work is required after contract award, it shall be performed at the hourly rate quoted below. Offerors should provide an hourly rate for all employees working on this project. Any change in individual resources or sub-contractors after award will require approval by the Agency Project Manager.

Hourly Rate		Est. # Hours		Total Cost
\$ 0.00	x	100	=	\$ 0.00

Total Cost \$ _____

Cost used for scoring:

Overall cost to complete example REF Application \$ _____

This page must be completed and submitted with all offers and received by the Authority at the time and date set for receipt of proposals.

ATTACHMENT 2 – PROPOSAL EVALUTION FORM

All proposals will be reviewed for responsiveness and then evaluated using the criteria set out herein.

Offeror Name: _____

Evaluator Name: _____

Date of Review: _____

RFP Number: **26003** _____

EVALUATION CRITERIA AND SCORING

THE TOTAL NUMBER OF POINTS USED TO SCORE THIS PROPOSAL IS **100**

4.01 Understanding and Methodology of the Project—20%**Maximum Point Value for this Section - 20 Points****100 Points x 20 Percent = 20 Points****Proposals will be evaluated against the questions set out below.**

- 1) How well has the offeror demonstrated a thorough understanding of the purpose and scope of the project?

NOTES:

- 2) How well has the offeror identified pertinent issues and potential problems related to the project?

NOTES:

- 3) To what degree has the offeror demonstrated an understanding of the deliverables the Authority expects it to provide?

NOTES:

- 4) Has the offeror demonstrated an understanding of the Authority 's time schedule and can meet it?

NOTES:

- 5) How comprehensive is the methodology and does it depict a logical approach to fulfilling the requirements of the RFP?

NOTES:

- 6) How well does the methodology match and achieve the objectives set out in the RFP?

NOTES:

- 7) How well does the methodology interface with the time schedule in the proposal?

NOTES:

EVALUATOR'S POINT TOTAL FOR 4.01: _____

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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- 1) How well does the management plan support all of the project requirements and logically lead to the deliverables required in the RFP?

NOTES:

- 2) How well is accountability completely and clearly defined?

NOTES:

- 3) Is the organization of the project team clear?

NOTES:

- 4) How well does the management plan illustrate the lines of authority and communication?

NOTES:

- 5) To what extent does the offeror already have the hardware, software, equipment, and licenses necessary to perform the contract?

NOTES:

- 6) Does it appear that offeror can meet the schedule set out in the RFP?

NOTES:

- 7) Has the contractor gone beyond the minimum tasks necessary to meet the objectives of the RFP?

NOTES:

- 8) To what degree is the proposal practical and feasible?

NOTES:

- 9) To what extent has the offeror identified potential problems?

NOTES:

EVALUATOR'S POINT TOTAL FOR 4.02: _____

4.03 Experience and Qualifications—20%**Percent Maximum Point Value for this Section****100 Points x 20 Percent = 20 Points****Proposals will be evaluated against the questions set out below.****1) Questions regarding the personnel.**

- a) Do the individuals assigned to the project have experience on similar projects?

NOTES:

- b) Are resumes complete and do they demonstrate backgrounds that would be desirable for individuals engaged in the work the RFP requires?

NOTES:

- c) How extensive is the applicable education and experience of the personnel designated to work on the project?

NOTES:

2) Questions regarding the firm.

- a) Has the firm demonstrated experience in completing similar projects on time and within budget?

NOTES:

- b) How successful is the general history of the firm regarding timely and successful completion of projects?

NOTES:

- c) Has the firm provided letters of reference from previous clients?

NOTES:

- d) If a subcontractor will perform work on the project, how well do they measure up to the evaluation used for the offeror?

NOTES:

EVALUATOR'S POINT TOTAL FOR 4.03: _____

EVALUATOR'S COMBINED POINT TOTAL FOR ALL EVALUATED SECTIONS: _____**4.04 Contract Cost — 40%****Maximum Point Value for this Section — 40 Points****100 Points x 40 PERCENT = 40 Points**

Overall, a minimum of **40** percent of the total evaluation points will be assigned to cost. The cost amount used for evaluation may be affected by one or more of the preferences referenced under SECTION 5.12.

Converting Cost to Points

The lowest cost proposal will receive the maximum number of points allocated to cost. The point allocations for cost on the other proposals will be determined through the method set out in SECTION 5.15.

4.05 Alaska Offeror Preference — 10%**Point Value for this Section — 10 Points****100 Points x 10 Percent = 10 Points**

If an offeror qualifies for the Alaska Bidder Preference, the offeror will receive an Alaska Offeror Preference. The preference will be 10 percent of the total available points. This amount will be added to the overall evaluation score of each Alaskan offeror.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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ATTACHMENT 3 – STANDARD AGREEMENT FORM FOR PROFESSIONAL SERVICES AND APPENDIX A

1. Agency Contract Number	2. Description of Professional Services	3. Solicitation No.	4. Agency Encumbrance Number
5. Vendor Contact Information			6. Alaska Business License Number
This contract is between the			
7. Alaska Energy Authority			hereafter the Authorities AEA, and
8. Contractor			hereafter the Contractor
Mailing Address		City	ST ZIP
9.			
ARTICLE 1. Appendices: Appendices referred to in this contract and attached to it are considered part of it.			
ARTICLE 2. Performance of Service:			
2.1 Appendix A (General Provisions), Articles 1 through 20, governs the performance of services under this contract.			
2.2 Appendix B sets forth the liability and insurance provisions of this contract.			
2.3 Appendix C sets forth the services to be performed by the Contractor.			
ARTICLE 3. Period of Performance: _____ through ..			
ARTICLE 4. Considerations:			
4.1 In full consideration of the Contractor's performance under this contract, the sum shall not exceed \$ <u>XXX</u> in accordance with the provisions of Appendix D.			
4.2 When billing the State, the Contractor shall refer to the Authorities' Contract Number and send the billing to:			
11. Alaska Energy Authority 813 West Northern Lights Anchorage, Alaska 99503 Email: AEAPayables@aidea.org		14. CERTIFICATION: I certify that the facts herein and on supporting documents are correct, that this voucher constitutes a legal charge against funds and appropriations cited, that sufficient funds are encumbered to pay this obligation, or that there is a sufficient balance in the appropriation cited to cover this obligation.	
12. CONTRACTOR		I am aware that to knowingly make or allow false entries or alternations on a public record, or knowingly destroy, mutilate, suppress, conceal, remove or otherwise impair the verity, legibility or availability of a public record constitutes tampering with public records punishable under AS 11.56.815-.820. Other disciplinary action may be taken up to and including dismissal.	
Name of Firm			
Signature of Authorized Representative	Date		
Printed Name and Title of Authorized Representative			
13. AUTHORITIES			
AEA			
		Signature of Authority Procurement Officer or Designee	Date
Signature of Authority Executive Director		Selwin C. Ray, Chief Procurement Officer	
Curtis Thayer, AEA Executive Director		Project Manager:	
		Email: PH:	

NOTICE: This contract has no effect until signed by the Authorities Executive Director and Procurement Officer or designee(s).

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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- 1.1 In this contract and appendices, "Agency Head" means the Executive Director who signs this contract on behalf of the Authority and includes a successor or authorized representative; and "Procurement Officer" means the Authority's procurement officer named on page 1, or his successor.
- 1.2 "Authority" means the Alaska Energy Authority for which this contract is to be performed and for which the Executive Director or Authorized Designee acted in signing this contract.

ARTICLE 2 INSPECTION AND REPORTS

- 2.1 The Authority may inspect, in the manner and at reasonable times it considers appropriate, all the Contractor's facilities and activities under this contract.
- 2.2 The Contractor shall make progress and other reports in the manner and at the times the department reasonably requires.

ARTICLE 3 DISPUTES

- 3.1 Any dispute arising under this contract not disposed of by mutual agreement shall be decided in accordance with AS 36.30.620-632.

ARTICLE 4 EQUAL EMPLOYMENT OPPORTUNITY

- 4.1 The Contractor may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, or because of age, disability, sex, marital status, changes in marital status, pregnancy or parenthood when the reasonable demands of the position(s) do not require distinction on the basis of age, disability, sex, marital status, changes in marital status, pregnancy, or parenthood. The Contractor shall take affirmative action to insure that the applicants are considered for employment and that employees are treated during employment without unlawful regard to their race, color, religion, national origin, ancestry, disability, age, sex, and marital status, changes in marital status, pregnancy or parenthood. This action must include, but need not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting out the provisions of this paragraph.
- 4.2 The Contractor shall state, in all solicitations or advertisements for employees to work on State of Alaska contract jobs, that it is an equal opportunity employer and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, disability, sex, and marital status, changes in marital status, pregnancy or parenthood.
- 4.3 The Contractor shall send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' compensation representative of the Contractor's commitments under this article and post copies of the notice in conspicuous places available to all employees and applicants for employment.
- 4.4 The Contractor shall include the provisions of this article in every contract, and shall require the inclusion of these provisions in every contract entered into by any of its subcontractors, so that those provisions will be binding upon each subcontractor. For the purpose of including those provisions in any contract or subcontract, as required by this contract, "Contractor" and "subcontractor" may be changed to reflect appropriately the name or designation of the parties of the contract or subcontract.
- 4.5 The Contractor shall cooperate fully with State efforts that seek to deal with the problem of unlawful discrimination, and with all other State efforts to guarantee fair employment practices under this contract, and promptly comply with all requests and directions from the State Commission for Human Rights or any of its officers or agents relating to prevention of discriminatory employment practices.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
RENEWABLE ENERGY FUND APPLICATIONS**

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- 4.6 Full cooperation in paragraph 4.5 includes, but is not limited to, being a witness in any proceeding involving questions of unlawful discrimination if that is requested by any official or agency of the State of Alaska; permitting employees of the Contractor to be witnesses or complainants in any proceeding involving questions of unlawful discrimination, if that is requested by any official or agency of the State of Alaska; participating in meetings; submitting periodic reports on the equal employment aspects of present and future employment; assisting inspection of the Contractor's facilities; and promptly complying with all State directives considered essential by any office or agency of the State of Alaska to insure compliance with all federal and State laws, regulations, and policies pertaining to the prevention of discriminatory employment practices.
- 4.7 Failure to perform under this article constitutes a material breach of the contract.

ARTICLE 5 TERMINATION

The Procurement Officer, by written notice, may terminate this contract, in whole or in part, when it is in the best interest of the Authority. The Authority is liable only for payment in accordance with the payment provisions of this contract for costs incurred before the effective date of termination.

ARTICLE 6 NO ASSIGNMENT OR DELEGATION

The Contractor may not assign, novate, or delegate this contract, or any part of it, or any right to any of the money to be paid under it, except with the written consent of the Authority.

ARTICLE 7 NO ADDITIONAL WORK OR MATERIAL

No claim for additional services, not specifically provided in this contract, performed or furnished by the Contractor, will be allowed, nor may the Contractor do any work or furnish any material not covered by the contract unless the work or material is ordered in writing by the Project Director and approved by the Agency Head.

ARTICLE 8 INDEPENDENT CONTRACTOR

The Contractor and any agents and employees of the Contractor act in an independent capacity and are not officers or employees or agents of the Authority in the performance of this contract.

ARTICLE 9

Not Applicable

ARTICLE 10 OWNERSHIP OF DOCUMENTS

All designs, drawings, specifications, notes, artwork, and other work developed in the performance of this contract for the Authority or delivered to the Authority are produced for hire and remain the sole property of the Authority and may be used by the Authority for any other purpose without additional compensation to the Contractor. The Contractor agrees not to assert any rights and not to establish any claim under the design patent or copyright laws. The Contractor, for a period of three years after final payment under this contract, shall furnish and provide access to all retained materials at the request of the Project Director. Unless otherwise directed by the Project Director, the Contractor may retain copies of all the materials.

ARTICLE 11 GOVERNING LAW

This contract is governed by the laws of the State of Alaska. Subject to the dispute resolution process provided for in Article 3 above, all actions concerning this contract shall be brought in the Superior Court of the State of Alaska and not elsewhere. The Contractor consents to the jurisdiction of the Superior Court of the State of Alaska.

ARTICLE 12 CONFLICTING PROVISIONS

Unless specifically amended and approved by the Department of Law, the General Provisions of this contract supersede any provisions in other appendices.

ARTICLE 13 OFFICIALS NOT TO BENEFIT

Contractor must comply with all applicable federal or State laws regulating ethical conduct of public officers and employees.

ARTICLE 14 COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee except employees or agencies maintained by the Contractor for the purpose of securing business. For the breach or violation of this warranty, the Authority may terminate this contract without liability or in its discretion deduct from the contract price or consideration the full amount of the commission, percentage, brokerage or contingent fee.

Article 15 CONTRACT FOR SIMILAR SERVICES

The Authority may contract for similar services from other contractors during the term of this contract.

ARTICLE 16 CONFLICT OF INTEREST

Promptly after execution of this contract, Contractor shall provide a statement indicating whether or not the firm or any individual working on the contract has a possible conflict of interest. If there is a conflict of interest or appearance of such a conflict, a brief description of the nature of the conflict must be included in the statement. The Authority will evaluate the nature of the conflict, Contractor's statement, and make a determination whether in its opinion a conflict of interest exists. This decision shall be made solely in the Authority's best interest. If a conflict of interest is discovered after contract award, the Authority, after review of the facts surrounding the conflict, may terminate the contract in its entirety.

ARTICLE 17 SUBCONTRACTORS

Contractor may subcontract portions of specific work or offer the services of other firms. The Contractor will be required to submit the names and addresses and other required information of all subcontractors. If subcontractors are added in order to respond to a specific work order the contractor will be required to provide information about the subcontractor with their work order proposal.

The Contractor must submit proof of proposed subcontractors' Alaska business licenses and insurance for those businesses working in Alaska within a reasonable time after this contract is executed.

If Contractor proposes to accomplish more than 50% of the work through subcontractors, they must provide a written statement that they are not operating as a joint venture with the other contractors and will be solely responsible for all work products, profits, and losses, as they relate to the performance of this contract. The Authority may terminate the contract in its entirety for any failure to comply with the preceding sentence.

ARTICLE 18 INTEGRATION

The Standard Agreement for Professional Services set out on page 1, together with Appendices A, B, C, and D, contain the complete and final statement of the terms the parties have agreed upon with respect to the subject matter covered. No prior agreements, representations or negotiations, whether written or oral, that are not expressly set out in this contract shall be binding on, or enforceable against, or may be relied upon by, any party.

ARTICLE 19 FORCE MAJEURE

The parties to this contract are not liable for the consequences of any failure to perform, or default in performing, any of their obligations under this Agreement, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of, and without the fault or negligence of, the respective party. For the purposes of this Agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.

ARTICLE 20 CONTRACTOR'S SIGNATURE CERTIFIES

THAT:

- 1) all services provided under this contract by the Contractor shall be performed in the United States; and
- 2) the Contractor is not established and headquartered or incorporated and headquartered in a country recognized as Tier 3 in the most recent United States Department of State's Trafficking in Persons Report.

The most recent United States Department of State's Trafficking in Persons Report is located at the following website: <http://www.state.gov/g/tip/> Failure to comply with (a) or (b) of this requirement will cause AEA to cancel the contract.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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ATTACHMENT 4 – APPENDIX B: INDEMNITY AND INSURANCE**Article 1. Indemnification**

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

Article 2. Insurance

Without limiting contractor's indemnification, it is agreed that contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the contracting officer prior to beginning work and must provide for a notice of cancellation, non-renewal, or material change of conditions in accordance with policy provisions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the contractor's services. All insurance policies shall comply with and be issued by insurers licensed to transact the business of insurance under AS 21.

2.1 Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

2.2 Commercial General Liability Insurance: covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per claim.

2.3 Commercial Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per claim.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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ATTACHMENT 5 – NOTICE TO PROCEED AND BILLING SUMMARY

 NOTICE TO PROCEED & BILLING SUMMARY				NTP No: Agreement No: Accounting Ref No.: Contract Expiration Date: Contract Authorization to Date:		
For: Contractor: Project Title: Category of Services:				NTP Completion Date: Amount of this NTP/Amend.: Method of Payment:		
NOTICE TO PROCEED						
BILLING SUMMARY						
This Invoice is for [] Progress [] Final Payment OR Sequential Invoice # for this [] Agreement is:						
GL Account Code	Funding Exp. Date	Authorized Task Groups	Authorized To - Date	Prior Approved Payments	This Billing	Total To - Date
Total Amount Authorized for All Groups			\$0.00			
Sum of Prior APPROVED Payments				0.00		
Sum for THIS INVOICE					0.00	
Sum of Prior Payments and this Invoice						0.00
Balance of Authorized Amount						\$0.00
				Payment Request & Certification: (Contractor)		
				Signature	Date	
Department of Labor Close-Out Required? (Construction)			Name:			
Approval for Payment						
PAYMENT RECOMMENDED (Agency Project Manager): I certify this invoice to be valid and accurate and that services were performed substantially in conformance with the contract requirements and schedule.				PAYMENT APPROVED (Authorized Agency Official): Based upon the Project Manager's recommendation and certification, I hereby approve payment.		
Signature				Signature		
Name:				Name:		

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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**INSTRUCTIONS TO CONTRACTOR for
COST REIMBURSEMENT NOTICE TO PROCEED
(NTP)& BILLING SUMMARY**

- 1 Retain an unmarked, as issued, copy of this form to be used for reproduction and billing.
- 2 If this NTP is unacceptable, notify the Contracting Agency immediately. If acceptable, acknowledge by signature where indicated on a copy of this NTP and return it within ten days after your receipt.
3. Submit monthly Invoices to the Agency Contract Manager named in this NTP. Provide a copy of page one of this form as the FACE PAGE of each invoice submitted and with the following entries accurately completed:

- a) Indicate if the Invoice is for Progress or Final Payment and show the Sequential Invoice Number for this NTP.
Entries in the following columns: Prior Approved Payments, This Billing, and Total to Date for each Task Group;
- b) plus the SUM TOTALS for: Authorized To - Date, Prior APPROVED Payments, THIS INVOICE, Prior Payments plus this Invoice, and Balance of Authorized Amount.

Note: "Prior APPROVED Payments" amounts may NOT be the same as the total of all your prior invoices if some items were disallowed or adjustments were made. If a prior billing has not been acknowledged with any payment, or a different amount from your billing was paid without notification to you of the reason(s), attach a request for an explanation and remedial action.

- 4 Sign, date and enter printed or typed name under "PAYMENT REQUEST (Contractor)" thereby attesting to the following:

"By signature on this form, the Contractor certifies entries to be true and correct for the services performed to date under or by virtue of said Agreement and in accordance with AS 36.30.400. The Contractor further certifies that all applicable Federal, State and Local taxes incurred by the Contractor in the performance of the services have been paid and that all Subcontractors engaged by the Contractor for the services included in any invoice shall be fully **compensated** by the Contractor for such services."

- 5 When Applicable, **ATTACH A CURRENT COPY OF EXHIBIT C-4, COST REIMBURSEMENT BILLING DETAIL FORM (from Appendix C of the Agreement) to each invoice. Internally check the form and correct mathematical extensions. The Contracting Agency may return erroneous invoices for correction before processing for payment.)**

- 6 Substantiate all charges in each billing, other than for Fixed Prices or Fixed Fees, by attaching a summary of hours expended and hourly labor rate per employee; summary of units completed; subcontractor invoices; expense receipts, etc.; or other proof of expenditures.

- 7 Prime Contractor's Labor and Indirect Cost shall be billed to the Contracting Agency within 45 days of performance. Subcontractors' Labor and Indirect Cost shall be billed to the Contracting Agency within 60 days of performance. All of the Contractor's and Subcontractors' Other Direct Costs (Expenses) shall be billed to the Contracting Agency within 90 days of being incurred. Charges submitted after the above stated times will, at the Contracting Agency's discretion, not be paid.

- 8 When each NTP is approximately 75% complete, the Contractor shall determine if the Authorized Amount(s) might be exceeded; and, if so, shall provide an estimate of cost to complete. The Contracting Agency will determine after discussion with the Contractor if additional cost is reasonable and does not include costs that should be absorbed by the Contractor. If additional cost is validated, a negotiated Amendment will be executed which either (1) reduces the scope of services/work products required commensurate with the Authorized Amount(s), or (2) increases the Authorized Amount(s) to that required for completion of the original contract scope.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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ATTACHMENT 6 – REPRESENTATIVE APPLICATION

SECTION 1 – APPLICANT INFORMATION			
<i>Please specify the legal grantee that will own, operate, and maintain the project upon completion.</i>			
Name (Name of utility, IPP, local government, or other government entity)			
Utility 123 –			
Tax ID # 92-XXXXXXX (Not-for-Profit)			
Date of last financial statement audit: December 20XX			
Mailing Address:		Physical Address:	
999 Power Street		999 Power Street	
Anchorage, AK 99503		Anchorage, AK 99503	
Telephone:	Fax:	Email:	
907.XXX.XXXX	800.XXX.XXXX	info@utility123.org	
1.1 Applicant Point of Contact / Grants Manager			
Name:		Title:	
John Doe		Utility Manager	
Mailing Address:			
4831 Eagle Street			
Anchorage, AK 99503			
Telephone:		Fax:	Email:
907.XXX.XXXX		866.XXX.XXXX	manager@utility123.org
1.1.1 Applicant Signatory Authority Contact Information			
Name:		Title:	
Jane Doe		COO	
Mailing Address:			
999 Power St			
Anchorage, AK 99503			
Telephone:		Fax:	Email:
907.XXX.XXXX		907.XXX.XXXX	coo@utility123.org
1.1.2 Applicant Alternate Points of Contact			
Name	Telephone:	Fax:	Email:
n/a			

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1.2 Applicant Minimum Requirements

Please check as appropriate. If applicants do not meet the minimum requirements, the application will be rejected.

1.2.1 Applicant Type

- ☒ An electric utility holding a certificate of public convenience and necessity under AS 42.05CPCN # XYZ, or
- ☐ An independent power producer in accordance with 3 AAC 107.695 (a) (1)CPCN # _____, or
- ☐ A local government, or
- ☐ A governmental entity (which includes tribal councils and housing authorities)

Additional minimum requirements

- ☒ **1.2.2** Attached to this application is formal approval and endorsement for the project by the applicant's board of directors, executive management, or other governing authority. If the applicant is a collaborative grouping, a formal approval from each participant's governing authority is necessary. **(Indicate yes by checking the box)**
- ☒ **1.2.3** As an applicant, we have administrative and financial management systems and follow procurement standards that comply with the standards set forth in the grant agreement (Section 3 of the RFA). **(Indicate yes by checking the box)**
- ☒ **1.2.4** If awarded the grant, we can comply with all terms and conditions of the award as identified in the Standard Grant Agreement template at <https://www.akenergyauthority.org/What-We-Do/Grants-Loans/Renewable-Energy-Fund/2021-REF-Application> (Any exceptions should be clearly noted and submitted with the application.) **(Indicate yes by checking the box)**
- ☒ **1.2.5** We intend to own and operate any project that may be constructed with grant funds for the benefit of the general public. If no please describe the nature of the project and who will be the primary beneficiaries. **(Indicate yes by checking the box)**

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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SECTION 2 – PROJECT SUMMARY

2.1 Project Title

Provide a 4 to 7 word title for your project. Type in the space below.

Representative Application

2.2 Project Location

2.2.1 Location of Project – Latitude and longitude (preferred), street address, or community name.

Latitude and longitude coordinates may be obtained from [Google Maps](https://www.google.com/maps) by finding your project's location on the map and then right clicking with the mouse and selecting "What is here? The coordinates will be displayed in the Google search window above the map in a format as follows: 61.195676,-149.898663. If you would like assistance obtaining this information, please contact AEA's Grants Manager Malakai Erskine by email at grants@akenergyauthority.org or by phone at (907) 771-3039.

Latitude	61.95555	Longitude	-149.89872
-----------------	----------	------------------	------------

The city of [Sample City] is located on the east bank of the Sample river, 35 miles northeast of Sample village in the Sample Delta. The city is 165 air miles northwest of Dodge and 460 air miles from Nowhere. Sample City is located at approximately 61.95555, -149.89872.

2.2.2 Community benefiting – Name(s) of the community or communities that will be the beneficiaries of the project.

The project will benefit the community of Sample City, Alaska (population of 637 as of 2018).

2.3 Project Type

Please check as appropriate.

2.3.1 Renewable Resource Type

☒ Wind	☐ Biomass or Biofuels (excluding heat-only)
☐ Hydro, Including Run of River	☐ Hydrokinetic
☐ Geothermal, Excluding Heat Pumps	☐ Transmission of Renewable Energy
☐ Solar Photovoltaic	☐ Storage of Renewable
☐ Other (Describe)	☐ Small Natural Gas

2.3.2 Proposed Grant Funded Phase(s) for this Request (*Check all that apply*)

<u>Pre-Construction</u>	<u>Construction</u>
☐ Reconnaissance	☐ Final Design and Permitting
☒ Feasibility and Conceptual Design	☐ Construction

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2.4 Project Description

Provide a brief, one-paragraph description of the proposed project.

Utility 123 is requesting \$237,500 and will provide a match of \$12,500 to conduct a wind power feasibility and conceptual design project for the community of Sample City. Utility 123, with the cooperation of the community, proposes to assess the feasibility of wind resources suited to provide power to the community and to prepare a conceptual design of a wind facility.

2.5 Scope of Work

Provide a short narrative for the scope of work detailing the tasks to be performed under this funding request. This should include work paid for by grant funds and matching funds or performed as in-kind match.

Utility 123 proposes to install and operate a meteorological (met) tower, collect and analyze wind data, analyze complete a reconnaissance-level geotechnical effort, and work with the community to determine the feasibility, location, turbine type, and conceptual design of a wind project in Sample City. The effort would culminate in a Concept Design Report (CDR), including an alternatives evaluation and conceptual design, that could be used to seek future construction funding.

2.6 Previous REF Applications for the Project

See Section 1.15 of the RFA for the maximum per project cumulative grant award amount

Round Submitted	Title of application	Application #, if known	Did you receive a grant? Y/N	Amount of REF grant awarded (\$)
Round Z	Sample City Wind Energy Feasibility and Conceptual Design Project	XYZ	Not funded	n/a

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
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SECTION 3 – Project Management, Development, and Operation

3.1 Schedule and Milestones

Please fill out the schedule below (or attach a similar sheet) for the work covered by this funding request. Be sure to identify key tasks and decision points, including go/no go decisions, in your project along with estimated start and end dates for each of the milestones and tasks. Please clearly identify the beginning and ending of all phases (I. Reconnaissance, II. Feasibility and Conceptual Design, III. Final Design and Permitting, and IV. Construction) of your proposed project. See the RFA, Sections 2.3-2.6 for the recommended milestones for each phase. Add additional rows as needed.

Task #	Milestones	Tasks	Start Date	End Date	Deliverables
1	Project scoping and contractor solicitation	Utility 123 would select contractor(s) for the wind feasibility study, geotechnical analysis, CDR, and permitting immediately following AEA's authorization to proceed.	Aug 1, 2021	Aug 15, 2021	Contracts/task Orders
2	Detailed resources assessment	Utility 123 would purchase or refurbish (as appropriate), ship, and install a met tower to bring online promptly in fall 2021. Utility 123 will identify a met tower site and obtain a letter of non-objection from the landowner, along with any other approvals from permitting agencies before the grant is awarded to expedite the start of data collection. Utility 123 would operate and monitor the met tower for one year, after which it will be dismantled. A wind resource report is to be drafted immediately following completion of data collection. Under this milestone, a preliminary geotechnical analysis would be done in October 2016. This work will help to guide later design work.	Sep 15, 2021	Oct 31, 2021	Wind Resource Analysis Report and Preliminary Geotechnical Report

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3	Identification of land and regulatory issues	Utility 123 would obtain a letter of non-objection for the placement of the met tower and geotechnical work. Based on the outcome of the wind study and meteorological data analysis, Utility 123 would identify a site for constructing wind infrastructure and initiate negotiations for site control for turbine(s) placement.	Sep 1, 2021	Jun 1, 2022	Site Control Agreement for Met Tower Section in the CDR
4	Detailed analysis of current cost of energy and future market	Utility 123 would analyze the existing and future energy costs and markets in Sample City. The information would be based on Utility 123 records and community plans. A community meeting would help determine future energy markets. Information regarding energy markets would be incorporated into the CDR.	Feb 1, 2022	Mar 30, 2022	Section in the CDR
5	Assessment of alternatives	Utility 123 would review turbine types and turbine locations to determine a recommended location and turbine system best suited for local conditions and community preferences.	May 1, 2020	Sep 30, 2022	Section in the CDR
6	Conceptual business and operations plan	This work is not needed. As an established and successful utility in rural Alaska, Utility 123 successfully operates wind projects and provides power to customers in numerous villages.	n/a	n/a	n/a
7	Conceptual design report and costs estimate	Utility 123 would examine various wind turbines to determine the best suited system to fit the lower energy demand and existing energy generation system in Sample City. The reconnaissance level geotechnical study will support a conceptual design and cost	Sep 1, 2022	Nov 1, 2022	Conceptual Design Report and Cost Estimate

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		estimate which will be included in the CDR.			
8	Detailed economic and financial analyses	Utility 123 would conduct an economic and financial analysis to be conducted by examining potential final design and construction, operating and maintenance costs, user rates, and other fiscal components. This analysis will included be in the CDR.	Jun 1, 2022	Aug 30, 2022	Section in the CDR
9	Permitting and environmental analysis	Utility 123 would research and conduct consultations with agencies to determine needed environmental permits for construction the project.	Sep 15, 2022	Dec 15, 2022	Section in the CDR
10	Final report and recommendations	Utility 123 would combine all of the memoranda and reports writtenfor the project in a final report for submission to AEA. The Final CDR will include the following information: • Wind Resource Analysis • Site Control Agreements • Existing and Future Energy Costs and Markets Analysis • Economic and Financial Analysis • Wind to heat agreements, if feasible • Geotechnical Report • Conceptual Design Report and Cost Estimate, including turbine evaluation	Sep 15, 2022	Dec 31, 2022	Final Conceptual Design Report

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3.2 Budget		
3.2.1 Funding Sources		
Indicate the funding sources for the phase(s) of the project applied for in this funding request.		
Grant funds requested in this application		\$237,500
Cash match to be provided^a		\$12,500
In-kind match to be provided^a		\$0
Energy efficiency match provided^b		\$0
Total costs for project phase(s) covered in application (sum of above)		\$250,000
Describe your financial commitment to the project and the source(s) of match. Indicate whether these matching funds are secured or pending future approvals. Describe the impact, if any, that the timing of additional funds would have on the ability to proceed with the grant. Utility 123 will commit a 5% cash contribution (\$12,500) of the total cost (\$250,000) of the Sample City Wind Feasibility Study.		
^a Attach documentation for proof (see Section 1.18 of the Request for Applications) ^b See Section 8.2 of this application and Section 1.18 of the RFA for requirements for Energy Efficiency Match.		
3.2.2 Cost Overruns		
Describe the plan to cover potential cost increases or shortfalls in funding.		

Utility 123 does not anticipate any cost increases or shortfalls in funding, basing the project budget on years of experience conducting feasibility studies for comparable communities in Alaska. However, cost overruns do happen – particularly in rural Alaska where extreme weather or logistical obstacles beyond Utility 123's control can increase the justified cost estimates. Should the project experience a funding issue, Utility 123 will seek alternative funding or allocate a larger cash match contribution. As Utility 123 has done in the past, it will cover any cost increase or shortfall in funding necessary to complete a started project.

3.2.3 Total Project Costs		
Indicate the anticipated total cost by phase of the project (including all funding sources). Use actual costs for completed phases. Indicate if the costs were actual or estimated.		
Reconnaissance	<i>Estimated</i>	\$0
Feasibility and Conceptual Design	<i>Estimated</i>	\$250,000
Final Design and Permitting	<i>Estimated</i>	\$350,000
Construction	<i>Estimated</i>	\$2,500,000
Total Project Costs (sum of above)	<i>Estimated</i>	\$3,100,000
Metering/Tracking Equipment [not included in project cost]	<i>Estimated</i>	\$400-1000 (dependent on results of feasibility study)

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If subsequent phases are required beyond the phases being applied for in this application, describe the anticipated sources of funding and the likelihood of receipt of those funds.

- State and/or federal grants
- Loans, bonds, or other financing options
- Additional incentives (i.e. tax credits)
- Additional revenue streams (i.e. green tag sales or other renewable energy subsidies or programs that might be available)

Assuming wind energy proves to be a viable local energy resource and following successful completion of the Sample City Wind Feasibility Study, Utility 123 will proceed with seeking funding for final design and construction for the project. Although the proposed feasibility study and CDR will be used to determine type, size, and number of turbines needed and subsequent costs, Utility 123 anticipates that final design and construction of a wind energy system in Sample City will cost \$350,000 and \$2.5 million respectively, for a total capital cost of approximately \$3.1 million. Recognizing the trend AEA has established for encouraging other-than-REF funds for construction phase projects, Utility 123 will research and apply for federal grants or grant/loan funds for the construction phase of this project. It is possible that the funding could come from a USDA Rural Utilities Service program, or another state or federal grant program. Utility 123 expects to provide a 10% cash match for the final design and construction phases of the Sample City wind project.

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3.2.3 Budget Forms

Applications **MUST** include a separate worksheet for each project phase that was identified in Section 2.3.2 of this application — I. Reconnaissance, II. Feasibility and Conceptual Design, III. Final Design and Permitting, and IV. Construction. Please use the tables provided below to detail your proposed project's total budget. Be sure to use one table for each phase of your project, and delete any unnecessary tables. The milestones and tasks should match those listed in 3.1 above.

If you have any question regarding how to prepare these tables or if you need assistance preparing the application please feel free to contact AEA's Grants Manager Malakai Erskine by email at grants@akenergyauthority.org or by phone at (907) 771-3039.

Phase 2 — Feasibility and Conceptual Design					
Milestone or Task	Anticipated Completion Date	RE- Fund Grant Funds	Grantee Matching Funds	Source of Matching Funds: Cash/In-kind/Federal Grants/Other State Grants/Other	TOTALS
1. Project scoping and contractor solicitation	Aug 15, 2021	\$2,850	\$150	Cash	\$3,000
2. Detailed resources assessment	Oct 31, 2021	\$33,250	\$1,750	Cash	\$35,000
3. Identification of land and regulatory issues	Jun 1, 2022	\$7,600	\$400	Cash	\$8,000
4. Detailed analysis of current cost of energy and future Market	Mar 30, 2022	\$7,600	\$400	Cash	\$8,000
5. Assessment of alternatives	Sep 30, 2022	\$7,600	\$400	Cash	\$8,000
6. Conceptual business and operations plan	Oct 31, 2022	\$2,850	\$150	Cash	\$3,000
7. Conceptual design report and costs estimate	Nov 1, 2022	\$ --	\$ --	--	\$ --
Geotech		\$39,900	\$2,100	Cash	\$42,000
Concept Design		\$91,200	\$4,800	Cash	\$96,000
8. Detailed economic and financial analyses	Aug 30, 2022	\$16,150	\$850	Cash	\$17,000
9. Permitting and environmental analysis	Dec 15, 2022	\$11,400	\$600	Cash	\$12,000
10. Final report and recommendations	Dec 31, 2022	\$17,100	\$900	Cash	\$18,00
TOTALS		\$237,500	\$12,500		\$250,000
Budget Categories:					
Direct Labor & Benefits		\$15,200	\$850	Cash	\$16,000
Travel & Per Diem		\$16,150	\$850	Cash	\$17,000
Equipment		\$16,150	\$850	Cash	\$17,000
Materials & Supplies		\$ --	\$ --	--	\$ --
Contractual Services		\$190,000	\$10,000	Cash	\$200,000
Construction Services		\$ --	\$ --	--	\$ --
Other		\$ --	\$ --	--	\$ --
TOTALS		\$237,500	\$12,500		\$250,000

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Indicate the source(s) of the cost estimates used for the project budget, including costs for future phases not included in this application.

Utility 123 based the proposed project budget for this grant application and estimates for subsequent phases on experiences. Utility 123 has successfully completed wind resource feasibility studies and wind energy infrastructure projects in multiple remote Alaskan communities, including comparable projects in Utility 123 service villages.

Costs for final design and construction are based on lessons learned from recent projects including other proximate rural villages. In addition, Utility 123's ample in-house knowledge of rural Alaska construction projects, wind turbine technologies, logistics, and the existing wind and construction market have helped to determine potential future costs.

3.3 Project Communications**3.3.1 Project Progress Reporting**

Describe how you plan to monitor the progress of the project and keep AEA informed of the status. Who will be responsible for tracking the progress? What tools and methods will be used to track progress?

Utility 123 has systems in place to accomplish reporting requirements successfully. Utility 123 has received funding and successfully administered grants from AEA, Denali Commission, US Department of Agriculture, US Department of Energy, completing more than 100 major projects in its service area over the last 20 years.

The project will be managed out of Utility 123's Projects Development Department. For financial reporting, the Projects Development Department's accountant, supported by the Administrative Services Department, will prepare financial reports. The accountant will be responsible for ensuring that vendor invoices and internal labor charges are documented in accordance with AEA guidelines and are included with financial reports. Utility 123 has sophisticated systems in place for accounting, payables, financial reporting, and capitalization of assets in accordance with AEA guidelines.

Utility 123 will require that monthly written progress reports be provided with each invoice submitted from primary contractor(s). The progress reports will include a summary of tasks completed, issues or problems experienced, upcoming tasks, and contractor's needs from Utility 123. Project progress reports will be collected, combined, and supplemented as necessary and forwarded as one package to the AEA project manager each quarter.

Because Utility 123 is responsible to its member communities and a board of directors, staying on schedule and within budget is essential. This project will result in clean, renewable energy from a wind farm and decreasing electricity costs for two rural, isolated, and impoverished communities. Utility 123's member communities are very interested in this project because their energy costs can be a large portion of their budgets. Utility 123 member communities expect status updates on village projects, including when and what work will occur, who will be involved, and when it will be completed. Community members are also able to contact Utility 123's CEO and Board of Directors directly if they have an inquiry or concern about a project.

An independent auditor's report on compliance for each major federal program and report on internal control over compliance required by Title 2 CFR 200 (Uniform Guidance) for Utility 123 in 2019 did not identify any deficiencies in internal control the auditor considered to be a material weakness. In addition, the

independent auditor's report on compliance with aspects of contractual agreements and regulatory requirements for Utility 123 in 2019 stated that nothing indicated Utility 123 failed to comply with the terms, covenants, provisions, or conditions of loans, grants, and security instruments as specified in 7 CFR part 1773.

Quarterly face-to-face meetings will occur between Utility 123 and AEA to discuss the status of all projects funded through the AEA Renewable Energy Grants program. Individual project meetings will be held, as required or requested by AEA.

John Doe will be responsible for tracking progress of project communications and Jane Doe, Utility 123's COO, may be contacted as an alternative manager.

3.3.2 Financial Reporting

Describe the controls that will be utilized to ensure that only costs that are reasonable, ordinary and necessary will be allocated to this project. Also discuss the controls in place that will ensure that no expenses for overhead, or any other unallowable costs will be requested for reimbursement from the REF Grant Program.

Utility 123's accounting system consists of software, procedures, and controls driven by the daily inputs and other actions of competent employees throughout the organization. The software is comprised of a comprehensive suite of Daffron-brand modules including accounting (payables/payroll/general ledger), work orders, purchase orders, customer service and billing, and warehouse/inventory. Some ancillary functions are accomplished on spreadsheets with data downloaded from the various Daffron modules.

Procedures and controls include but are not limited to adequate separation of duties, manager-level approval of all expenditures, CEO-level approval of all major expenditures, a formal purchasing system (including purchase orders) for acquisition of materials and components, and a formal contracting system for acquisition of contractual services (consultants, construction contractors, etc.). Accounts payable are processed and recorded by the Utility 123 Accounting Department, all expenditures are coded to budget categories and assigned to appropriate work orders. The Projects Development and Key Accounts Department, particularly its Project Manager, and its Senior Accountant; are primarily responsible for all grant reporting.

Utility 123's team, with years of experience and knowledge of managing AEA-funded project costs and grant reimbursements, has a system in place for ensuring that only costs that are reasonable, ordinary, and necessary are charged to a project, and that only costs that are eligible are submitted for reimbursement. First, Utility 123's Project Manager (PM) is responsible for determining whether costs are appropriate and acceptable. The PM reviews all invoices from contractors and vendors and all in-house labor and equipment charges. Second, the Projects Development and Key Accounts Department Manager (DM) reviews costs associated with outsourced services, including consultant and contractor invoices, to ensure that the charges are reasonable. The DM also reviews his department's staff labor charges (timesheets) to the project. Third, the Operations and Engineering Department Managers review all in-house labor (timesheets) and expense reports for their respective departments to make sure that the charges are acceptable. Finally, the Projects Development and Key Accounts Department Senior Accountant, while preparing AEA financial reports and reimbursement requests, provides a review of both outsourced and in-house charges to determine whether they are allowable costs. The Senior Accountant is very experienced with REF grant reporting and grant agreements and understands what costs would be accepted by AEA.

Utility 123 has systems in place to keep unacceptable overhead costs from being charged to and reimbursed through the REF Grant Fund Program. Upon project initiation, an Utility 123 work order number is created to

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track all project labor and expenses. Utility 123 staff and contractors reference this number on all timesheets and invoices when working on the project, ensuring that project costs are known. Purchase orders are universally used to establish spending limits for purchases of materials, which are then monitored by the Accounting Department through the enterprise accounting system. Task orders and contracts are universally used to establish spending limits for purchases of contractual services, which are then monitored by the Projects Development and Key Accounts Department utilizing spreadsheets. Direct labor expenses (gross payroll) are tracked separately from overhead costs including employee benefits and payroll taxes. Once labor hours have been calculated, overhead including employee benefits and payroll taxes are applied in a separate transaction on the work order.

Utility 123 and AEA have an agreed rate cap for employer costs of payroll, consisting only of employee benefits and payroll taxes. Utility 123 can ensure that only allowable costs would be requested for reimbursement because the direct labor and indirect/overhead costs are separate transactions (and thus the indirect/overhead amounts can be easily omitted from reimbursement), and because the allowable rate has been established and agreed upon (and thus can be easily included for reimbursement).

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Include resumes for known key personnel and contractors, including all functions below, as an attachment to your application. In the electronic submittal, please submit resumes as separate PDFs if the applicant would like those excluded from the web posting of this application.

4.1.1 Project Manager

Indicate who will be managing the project for the Grantee and include contact information. If the applicant does not have a project manager indicate how you intend to solicit project management support. If the applicant expects project management assistance from AEA or another government entity, state that in this section.

John Doe is the Utility Manager and has served as manager of the Projects Development Department for Utility 123 since 2016 where he leads a team focused on stabilizing the cost of energy in rural Alaskan villages through improved power plant efficiency, wind and other renewable power generation, and interties between villages.

Previously, Mr. Doe worked as a project manager under contract to Utility 123. He was responsible for the management of the design and construction of capital projects and has 25 years of experience managing construction projects throughout Alaska. Mr. Doe has a degree in Mining Engineering from the University of Alaska, Fairbanks.

4.1.2 Project Accountant

Indicate who will be performing the accounting of this project for the grantee. If the applicant does not have a project accountant indicate how you intend to solicit financial accounting support.

Susie Que is the Project Accountant and is the Manager of Administrative Services at Utility 123. Ms. Que has been employed with Utility 123 since 1993 and is responsible for all administrative and financial records. She is responsible for preparing grant reports, Regulatory Commission of Alaska rate filings, financial forecasts, budgets and PCE reports, as well as overseeing the day-to-day office operations. Ms. Que has worked for previous employers as an office manager, bookkeeper, and held a tax internship where she prepared individual, partnership, and corporate tax returns.

Ms. Que has a BBA in accounting and has attended various specialized training programs in her area of expertise including National Rural Electric Cooperative Association's management internship program.

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4.1.3 Expertise and Resources

Describe the project team including the applicant, partners, and contractors.

For each member of the project team, indicate:

- the milestones/tasks in 3.1 they will be responsible for;
- the knowledge, skills, and experience that will be used to successfully deliver the tasks;
- how time and other resource conflicts will be managed to successfully complete the task.

If contractors have not been selected to complete the work, provide reviewers with sufficient detail to understand the applicant's capacity to successfully select contractors and manage complex contracts.

Utility 123 would use a project management approach that has been used to successfully design and construct wind turbines throughout rural Alaska: a team of Utility 123 staff and external consultants.

Utility 123 staff and their role on this project includes:

- **Jane Doe, President and Chief Executive Officer**, would act as Project Executive and will maintain ultimate programmatic and financial authority.
- **John Doe, Manager, Community Development and Key Accounts**, would lead the project management team consisting of Utility 123 staff, consultants, and contractors. Mr. Doe will be the program manager for this project and will assign project manager resources to implement the project. He will also be responsible for reporting directly to AEA on the status of the project. Together with his group, John would coordinate the wind data analysis, geotechnical work, conceptual design, and the concept design report.
- **Erik Doe, Manager of Operations**, would provide oversight and input in planning for construction, distribution, and energy generation components of the project.
- **Will Doe, Manager of Engineering**, would provide technical assistance and information on the existing power system, possible issues, and project study needs.
- **Susie Que, Manager of Administrative Services**, would provide support in accounting, payables, financial reporting, and capitalization of assets in accordance with AEA guidelines.
- **Sarah Doe, Community Liaison**, would communicate directly with Sample City residents to ensure that the community is informed.

It is likely that one of Utility 123's in-house contractors would lead the work. They would be responsible for:

- Obtaining site control/access and permits for geotechnical work
- Selecting, coordinating, and managing the wind resource, geotechnical, engineering, and permitting consultants and ensuring that deliverables are on time and within budget
- Develop the existing and future energy costs and markets information and the conceptual business and operating plan
- Working to develop the economic and financial information

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Contractors for this project would include:

- **Wind Resource Consultant:** Utility 123 currently has an on-call contract with Consultant 123, LLC for wind resource studies and reports. Joe Sample's (Consultant 123's owner) resume is attached. Consultant 123 would:
 - Consult on the installation, operation and maintenance of the tower
 - Draft the wind resource report
- **Geotechnical consultant:** Utility 123 would select and employ an experienced geotechnical consultant who would:
 - Conduct a reconnaissance level geotechnical and natural hazards field study and report of the project area
- **Engineering consultant:** Utility 123 would select and employ an engineering consultant who would:
 - Provide conceptual design and engineering specifications for the wind turbines
- **Environmental Consultant:** Utility 123 currently has an on-call contract with Consultant 789, Inc. for environmental permitting. Sarah Samples' (Consultant 789's president) resume is attached. Solstice would:
 - Consult with agencies
 - Develop and submit permit applications for the met tower
 - Document permit needs and environmental requirements for a future wind project

Selection Process for Contractors: The geotechnical and engineering consultant selection would be based upon technical competencies, past performance, written proposal quality, cost, and general consensus from an internal Utility 123 technical steering committee. The selection of the consultant would occur in strict conformity with Utility 123's procurement policies, conformance with OMB circulars, and DCAA principles.

Resumes for all key staff, partners, and consultants can be found attached in Tab A.

4.2 Local Workforce

Describe how the project will use local labor or train a local labor workforce.

Recognizing that local labor is good for communities and families, Utility 123 uses local labor whenever possible for daily operations and special projects. Local wages circulate, often multiple times, within the community thereby benefitting the community as a whole.

Utility 123 is very proud of its training program wherein power plant operators are trained by an itinerant training supervisor who travels continuously to Utility 123 communities and works one-on-one with the operators as needed and throughout the year.

It is typical that local labor saves money as demonstrated when comparing local labor wages against imported labor wages, travel, and per diem. Therefore, Utility 123 addresses local labor in its bid documents as appropriate and allowed by law. For example, part of the Contractor's Responsibilities in the Sample village wind project bid documents says:

"Local Labor and Local Firms Participation Goal: The participation goal for this project has been established as a percentage of the total dollar amount awarded to the successful bidder in the amount of 20% to local labor and local firms. The successful bidder shall provide the Owner documentation to demonstrate compliance with this goal. If this goal cannot be reached and good faith efforts were demonstrated through

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documentation to the Owner, the Owner has the right to issue a variance to this section.”

Also, from other power plant bid documents:

“Use of Local Labor and Local Firms: To the maximum extent practicable, CONTRACTOR shall accomplish the Project using local labor and Alaska firms.”

Assuming the proposed wind feasibility study shows wind to be a viable resource in Sample village, Utility 123 will include language similar to above in the construction bid documents and contract.

In most Utility 123 communities, the power plant operators are employees of their city government. Through a contract process, Utility 123 reimburses the city for the wages and fringe benefits of the power plant operators. During project feasibility, design, and construction phases, plant operators provide necessary assistance; typically, with tasks like taking photographs, changing met tower sim cards, and hosting and assisting engineers and others coming into the community for project work.

Utility 123 intends to hire a local contact to maintain the met tower and periodically download data. Assuming the proposed wind feasibility study shows wind to be a viable resource in Sample City, Utility 123 will require the selected construction contractor to use local labor.

SECTION 5 – TECHNICAL FEASIBILITY

5.1 Resource Availability

5.1.1 Assessment of Proposed Energy Resource

Describe the potential extent/amount of the energy resource that is available, including average resource availability on an annual basis. For pre-construction applications, describe the resource to the extent known. For design and permitting or construction projects, please provide feasibility documents, design documents, and permitting documents (if applicable) as attachments to this application (See Section 11). Likelihood of the resource being available over the life of the project. See the “Resource Assessment” section of the appropriate Best Practice Checklist for additional guidance.

According to existing knowledge and wind feasibility studies conducted for comparable communities in the region, it is assumed Sample City is rated as a class 4 wind regime. The purpose of the feasibility study is to collect local wind data and conduct a thorough analysis to determine the wind energy potential in the community.

5.1.2 Alternatives to Proposed Energy Resource

Describe the pros and cons of your proposed energy resource vs. other alternatives that may be available for the market to be served by your project.

Wind energy has proven a viable energy resource in multiple Utility 123 communities with similar environmental and climate conditions, including Village A and Village B. Barging in diesel fuel is the primary source of local power, which is costly. Other alternative energy resources (solar, hydro, and geothermal) are not anticipated to be as cost effective or viable as wind energy.

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5.1.3 Permits

Provide the following information as it may relate to permitting and how you intend to address outstanding permit issues. See the “Environmental and Permitting Risks” section of the appropriate Best Practice Checklist for additional guidance.

- List of applicable permits
- Anticipated permitting timeline
- Identify and describe potential barriers including potential permit timing issues, public opposition that may result in difficulty obtaining permits, and other permitting barriers

FAA Air Navigation Hazard Permitting: The met tower placement would be selected based on airspace availability and limitations to meet the FAA’s Notice Criteria. If the project proves to be feasible, Utility 123 would seek a no-hazard determination from FAA for the potential turbines after the turbine location and type have been selected. Utility 123 would do this early in the process to ensure that adequate time and resources are allocated to this effort. It is expected to take about 3 months to obtain the FAA determination for the turbines.

Endangered Species Act/Migratory Bird Treaty Act Consultation: Consultation with the U.S. Fish and Wildlife Service (USFWS) in compliance with the Endangered Species Act and Migratory Bird Treaty Act would be required to install the met tower. A finding letter stating that the project would not be expected to impact threatened or endangered species or birds would be drafted and submitted to the USFWS once Utility 123 is assured the design and construction of this project is funded. It is expected that Utility 123 would receive concurrence from the Service within one month. The authorization would be issued prior to initiating met tower work in September 2021.

Clean Water Act (Section 401) Permit: Because many locations within Sample City are wetlands, it is possible that a wetlands permit would be needed from the U.S. Army Corps of Engineers (Corps) to install the met tower and to conduct geotechnical work. Based on an expected limited footprint, a “Nationwide Permit” would be sought for the effort. The application/preconstruction notice would be submitted to the Corps once funding is assured.

5.2 Project Site

Describe the availability of the site and its suitability for the proposed energy system. Identify potential land ownership issues, including whether site owners have agreed to the project or how you intend to approach land ownership and access issues. See the “Site control” section of the appropriate Best Practice Checklist for additional guidance.

Utility 123 has not determined a location for the placement of the met tower. Utility 123 will consult with the local municipality and other land owners to select a site and to obtain site control for placement of the met tower and conducting geotechnical fieldwork. A letter of non-objection will be sought from the corporation or city, depending on location, after project funding is assured. Starting with a community meeting to announce that the project has been funded, Utility 123’s community liaison will lead the effort to gain site control. Since the major landholders support the project (see attached letters of support, Tab B), site control is not expected to be an obstacle to the placement of the met tower and conducting geotechnical fieldwork.

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5.3 Project Technical & Environmental Risk

5.3.1 Technical Risk

Describe potential technical risks and how you would address them.

- Which tasks are expected to be most challenging?
 - How will the project team reduce the risk of these tasks?
 - What internal controls will be put in place to limit and deal with technical risks?
- See the “Common Planning Risks” section of the appropriate Best Practice Checklist for additional guidance.

Site Control/Access: Sometimes site control for the placement of met towers or turbines is difficult; however, because the community supports the project (letters of support have been received from all community entities), it is not expected that gaining site control would be difficult.

Turbine Selection: Utility 123 will have to identify a suitable turbine which will involve Utility 123’s managers, consultants, and the community working together to determine the best choice for the community’s system.

Weather: Weather could delay geotechnical fieldwork and/or the erection of the met tower; however, experienced consultants and contractors, familiar with Alaskan weather conditions, would be selected. It is unlikely that a delay in the total project schedule would occur if the fieldwork or erection of the met tower is delayed. It is possible to erect the met tower during winter months. The met tower would be installed to handle Sample City’s winter weather conditions. The met tower would be monitored by local Utility 123 personnel to ensure the met tower is up and functioning properly throughout the year.

Permitting: Permits for the met tower would be acquired, including approvals for the Federal Aviation Administration and the U.S. Fish and Wildlife Service. Utility 123 would hire an environmental consultant familiar with permitting wind projects in Alaska. Early consultation with agencies would occur in order to flesh out location, natural and social environment, specific species, and mitigation issues. The consultant would work openly with the agencies and conduct studies as appropriate.

5.3.2 Environmental Risk

Explain whether the following environmental and land use issues apply, and if so which project team members will be involved and how the issues will be addressed. See the “Environmental and Permitting Risks” section of the appropriate Best Practice Checklist for additional guidance.

- Threatened or endangered species
- Habitat issues
- Wetlands and other protected areas
- Archaeological and historical resources
- Land development constraints
- Telecommunications interference
- Aviation considerations
- Visual, aesthetics impacts
- Identify and describe other potential barriers

Threatened or endangered species: The U.S. Fish and Wildlife Service would be consulted to ensure that installation of a met tower would have no effect on threatened or endangered species. If clearing is required for the installation of the met tower, it would be timed to avoid impacts to migratory birds in compliance with the Migratory Bird Treaty Act.

Habitat issues: During permitting, the project team would work with agencies to ensure that the project

would not impact any State refuges, sanctuaries or critical habitat areas, federal refuges or wilderness areas, or national parks.

Wetlands and other protected areas: If the met tower or wind project location are proposed in a designated wetlands area, a U.S. Army Corps of Engineers’ wetlands permit would be secured.

Archaeological and historical resources: Compliance with the National Historic Preservation Act and consultation with the State Historic Preservation Officer would be conducted prior to construction of the wind turbines.

Land development constraints: No land development constraints are currently identified; however, if any should arise, Utility 123 will work with the appropriate agencies to ensure the project is in compliance.

Telecommunications interference: The met tower and wind project location would be placed in a location that would not interfere with the telecommunications service.

Aviation considerations: Met tower placement would be selected based on airspace availability and limitations to meet the FAA’s Notice Criteria. The wind project location would be selected based on airspace availability and limitations to meet the FAA’s Notice Criteria, and a no-hazard determination would be sought from the FAA as soon as the wind project location has been finalized.

Visual, aesthetics impacts: If final data supports placement of wind turbines, Utility 123 will conduct community meetings to discuss visual impacts and how they could be mitigated.

5.4 Technical Feasibility of Proposed Energy System

In this section you will describe and give details of the existing and proposed systems. The information for existing system will be used as the baseline the proposal is compared to and also used to make sure that proposed system can be integrated.

Only complete sections applicable to your proposal. If your proposal only generates electricity, you can remove the sections for thermal (heat) generation.

5.4.1 Basic Operation of Existing Energy System

Describe the basic operation of the existing energy system including: description of control system; spinning reserve needs and variability in generation (any high loads brought on quickly); and current voltage, frequency, and outage issues across system. See the “Understanding the Existing System” section of the appropriate Best Practice Checklist for additional guidance.

The existing power generation system in Sample City consists of 4 diesel generators in a three-phase electrical system: two 350 kilo-watt (kW) Cummins K19G2 1200 and two 500 kW Cummins K19G4 1800. The plant operator selects which engine to run and manually controls which engine(s) are online. The most efficient available engine is used to meet the load. All engines were installed in 2001. Individual generator efficiency is not tracked, but the aggregate diesel generator efficiency in 2019 was 12.89 kilo-watt hours per gallon (kWh/gallon). The plant has an underground fuel supply line from the new consolidated bulk fuel storage tank facility to a 4,000-gallon day tank.

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5.4.2 Existing Energy Generation Infrastructure and Production

In the following tables, only fill in areas below applicable to your project. You can remove extra tables. If you have the data below in other formats, you can attach them to the application (see Section 11).

5.4.2.1 Existing Power Generation Units

Include for each unit include: resource/fuel, make/model, design capacity (kW), minimum operational load (kW), RPM, electronic/mechanical fuel injection, make/model of genset controllers, hours on genset

Unit 1: Diesel generator, Cummins K19G2, 350 kilo-watt (kW), 50 kW min, 1200 RPM, mechanical fuel injection (FI), 40,000 hours, installed 2001

Unit 2: Diesel generator, Cummins K19G2 ,350 kW, 50 kW min, 1200 RPM, mechanical FI, 48,000 hours, installed 2001

Unit 3: Diesel generator, Cummins K19G4, 500 kW, 50 kW min, 1800 RPM, mechanical FI, 42,000 hours, installed 2001

Unit 4: Diesel generator, Cummins K19G4, 500 kW, 50 kW min, 1800 RPM, mechanical FI, 46,000 hours, installed 2001

Unit 5:

Unit 6:

Is there operational heat recovery? (Y/N) If yes estimated annual displaced heating fuel (gallons)

No

5.4.2.2 Existing Distribution System

Describe the basic elements of the distribution system. Include the capacity of the step-up transformer at the powerhouse, the distribution voltage(s) across the community, any transmission voltages, and other elements that will be affected by the proposed project.

The Sample City Power plant generates at 277/480V three phase. There are three breakers that distribute power from the main bus to three, single-phase step up transformers rated at 167KVA each. The distribution voltage is 7200/12470 grndy. All distribution is overhead. There is three-phase distribution through the main part of town that feed the school, the water plant, and the fish plant. There are also single-phase radial lines that go into residential areas.

5.4.2.3 Existing Thermal Generation Units (if applicable to your project) n/a

5.4.2.4 O&M and replacement costs for existing units	Power Generation	Thermal Generation
i. Annual O&M cost for labor	\$28,000 Based on Utility 123 aggregate number	
ii. Annual O&M cost for non-labor		
iii. Replacement schedule and cost for existing units		

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5.4.2.5 Annual Electricity Production and Fuel Consumption (Existing System)

Use most recent year. Replace the section (Type 1), (Type 2), and (Type 3) with generationsources

Month	Generation (Diesel) (kWh)	Generation (Type 2) (kWh)	Generation (Type 3) (kWh)	Fuel Consumption (Diesel- Gallons)	Fuel Consumption [Other]	Peak Load (kWh)	Minimum Load (Assumed ½ Average Load)
January	195,029			14,610		424.0	48.10
February	178,333			13,340		389.0	48.10
March	177,538			13,360		359.0	44.54
April	169,998			13,320		343.0	44.54
May	161,684			12,830		389.0	39.06
June	138,815			11,110		270.0	31.47
July	140,606			15,260		309.0	30.54
August	141,511			11,020		315.0	33.56
September	159,439			11,700		313.0	44.02
October	164,080			11,710		330.0	40.88
November	171,881			12,450		334.0	43.91
December	211,448			15,850		327.0	50.82
Total	2,010,362			156,560		341.8	41.63

5.4.2.6 Annual Heating Fuel Consumption (Existing System) n/a**5.4.3 Future Trends**

Describe the anticipated energy demand in the community, or whatever will be affected by the project, over the life of the project. Explain how the forecast was developed and provide year by year forecasts. As appropriate, include expected changes to energy demand, peak load, seasonal variations, etc. that will affect the project.

Based on U.S. Census data, Sample City's population has grown by about 7% in the last ten years (pop. 601 in 2010 to pop. 649 in 2019), suggesting trends in energy demands for the existing diesel generatorsystem could possibly increase, although not substantially. Currently there are no known plans for other population or energy increase drivers (fish processing plant, platinum mining, etc.); however, additional information will be gathered during CDR phase to more accurately determine future trends.

Diesel energy costs in Sample City are high and require subsidizing power costs through Alaska's Power Cost Equalization program. Since energy demand could moderately increase in the foreseeable future, wind energy development could be used to reduce the cost of energy and offset energy production from diesel fuel.

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5.4.4 Proposed System Design

Provide the following information for the proposed renewable energy system:

- A description of renewable energy technology specific to project location
- The total proposed capacity and a description of how the capacity was determined
- Integration plan, including upgrades needed to existing system(s) to integrate renewable energy system:
Include a description of the controls, storage, secondary loads, distribution upgrades that will be included in the project
- Civil infrastructure that will be completed as part of the project—buildings, roads, etc.
- Include what backup and/or supplemental system will be in place

See the “Proposed System Design” section of the appropriate Best Practice Checklist for additional guidance.

Renewable energy technology: Utility 123 plans to conduct a feasibility analysis, resource assessment, and conceptual design to assess the possibility of using wind power in Sample City. In every deployment the integration of intermittent generation to the energy grid is a key component to a successful project. This feasibility study is intended to determine how a wind energy project could be properly integrated in to the existing power system and have a meaningful impact on diesel consumption or if a larger project including necessary system upgrades would be recommended. If the wind resource proves suitable and funding is obtained, wind turbines would be installed to serve the community. Currently, Utility 123 anticipates that a 300-kW capacity system could be installed; however, this study will assist in determining the best wind energy generation alternative.

Proposed capacity/capacity determination: The purpose of this work is to gather background information to plan a future alternative energy facility. Anticipated capacity and generation would be examined to determine the best turbine option and number, secondary load options, and control schemes for the community. The impact on heat recovery would also be considered to determine the best capacity options for the community.

Integration plan: The wind turbines would need to interconnect with the existing diesel power plant. Secondary load control could dispatch boilers or charge energy storage systems as required to use excess wind energy. Depending on the complexity of the proposed system, the diesel generators would continue running at minimum levels, or be allowed to go diesel-off. Conceptual design, to be completed as a part of this project, would detail how power from a wind turbine would be integrated and delivered into the existing system in Sample City.

Civil infrastructure: Civil infrastructure access to a met tower to be included in implementation of the proposed feasibility study. Assuming wind energy proves a viable resource in Sample City, access road to and pad foundation support for wind turbines will be included in the concept design and subsequent final design and construction phases of the project.

Backup/supplemental system: The existing power plant with diesel fuel generators and the existing power distribution system will be maintained to provide for the full power needs of the community.

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5.4.4.1 Proposed Power Generation Units							
Unit #	Resource/ Fuel type	Design capacity (kW)	Make	Model	Expected capacity factor	Expected life (years)	Expected Availability
1	Wind	100	TBD	TBD	TBD	20	2025
2	Wind	100	TBD	TBD	TBD	20	2025
3	Wind	100	TBD	TBD	TBD	20	2025

5.4.4.2 Proposed Thermal Generation Units (if applicable) <i>n/a</i>

5.4.5 Basic Operation of Proposed Energy System - To the best extent possible, describe how the proposed energy system will operate: When will the system operate, how will the system integrate with the existing system, how will the control systems be used, etc. - When and how will the backup system(s) be expected to be used See the “Proposed System Design” section of the appropriate Best Practice Checklist for additional guidance.
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The wind turbines would need to interconnect with the existing diesel power plant. Secondary load control would be studied to determine whether dispatch boilers could be installed to use excess wind energy while allowing the diesel generators to continue running at efficient levels. Conceptual design, to be completed as a part of this project, would detail how power from a wind turbine would be integrated and delivered into the existing system in Sample City.

A wind energy system in Sample City will be designed to operate with the existing diesel generation. The existing system will operate at a lower capacity to supplement wind energy depending on fluctuations in available wind. Wind will be the primary energy source and contribute significantly to the existing energy system, but the diesel generators will remain online to ensure consistent energy access during wind fluctuations and function as a backup should wind energy go offline at any point.

The proposed system will not alter the heating system or transportation needs. Sample City will be dependent on heating oil for home heating, and diesel and gasoline fuel for transportation needs.

The anticipated effect of the proposed system is a decrease use of fuel for electrical power generation. Also, the power generator use in Sample City would be decreased, thereby decreasing generator operations and maintenance costs, enabling generators to last longer and need fewer overhauls

5.4.5.1 Expected Capacity Factor	24%
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5.4.5.2 Annual Electricity Production and Fuel Consumption (Proposed System)							
Month	Generation (Proposed System - Wind) (kWh)	Generation (Type 2 - Diesel) (kWh)	Generation (Type 3) (kWh)	Fuel Consumption (Diesel- Gallons)	Fuel Consumption [Other]	Secondary load (kWh)	Storage (kWh)
January	52,500	142,529		11,055			
February	52,500	125,833		9,760			
March	52,500	125,038		9,699			
April	52,500	117,498		9,114			
May	52,500	109,184		8,469			
June	52,500	86,315		6,695			
July	52,500	88,106		6,834			
August	52,500	89,011		6,904			
September	52,500	106,939		8,295			
October	52,500	111,580		8,655			
November	52,500	119,381		9,260			
December	52,500	158,948		12,329			
Total	630,000	1,380,362		107,070			

5.4.5.3 Annual Heating Fuel Consumption (Proposed System) n/a

5.4.6 Proposed System Operating and Maintenance (O&M) Costs

O&M costs can be estimated in two ways for the standard application. Most proposed renewable energy projects will fall under Option 1 because the new resource will not allow for diesel generation to be turned off. Some projects may allow for diesel generation to be turned off for periods of time; these projects should choose Option 2 for estimating O&M.

Option 1: Diesel generation ON	\$700 (this phase) \$31,500 (construction project phase from Utility 123’s own data-based estimation of \$0.050/kWh for wind energy)
<i>For projects that <u>do not result in shutting down diesel generation</u> there is assumed to be no impact on the base case O&M. Please indicate the estimated annual O&M cost associated with the proposed renewable project.</i>	
Option 2: Diesel generation OFF	
<i>For projects that will result in <u>shutting down diesel generation</u> please estimate:</i> 1. Annual non-fuel savings of shutting off diesel generation 2. Estimated hours that diesel generation will be off per year. 3. Annual O&M costs associated with the proposed renewable project.	

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5.4.7 Fuel Costs

Estimate annual cost for all applicable fuel(s) needed to run the proposed system (Year 1 of operation - 2024)

	Diesel (Gallons)	Electricity	Propane (Gallons)	Coal (Tons)	Wood	Other
Unit cost (\$)	3.27					
Annual Units	107,070					
Total Annual cost (\$)	350,119					

5.5 Performance and O&M Reporting

For construction projects only

5.5.1 Metering Equipment

Please provide a short narrative, and cost estimate, identifying the metering equipment that will be used to comply with the operations reporting requirement identified in Section 3.15 of the Request for Applications.

Because this project involves feasibility, geotechnical and conceptual design work only, no meter would be installed. Utility 123 installs meters on all renewable projects (primarily wind turbines) and will install a meter turbine for this wind energy construction project. Metering equipment specifications and costs would be determined during the proposed conceptual design work and subsequent final design project phases. When this project is constructed, it is likely that the meter would be an Elster 16s (part number ZD3300K0082). This meter costs about \$400.

5.5.2 O&M reporting

Please provide a short narrative about the methods that will be used to gather and store reliable operations and maintenance data, including costs, to comply with the operations reporting requirement identified in Section 3.15 of the Request for Applications

As a cooperative, Utility 123 pools O&M costs of all member communities. Based on existing wind turbines, current annual O&M costs are approximately \$28,000 kWh. The met tower would require monthly monitoring and data management. It is expected that this would cost \$700 total for the year that the met tower is erected. The cost would be funded by this grant. If the turbines prove feasible, their maintenance would be funded by Utility 123's general operating costs. If the turbines prove feasible, their maintenance would be funded by Utility 123's general operating costs. Estimated O&M costs for the proposed wind project are \$31,500 based on Utility 123's rate of \$0.50 per kWh.

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SECTION 6 – ECONOMIC FEASIBILITY AND BENEFITS

6.1 Economic Feasibility

6.1.1 Economic Benefit

	Annual	Lifetime
Anticipated Diesel Fuel Displaced for Power Generation (gallons)	43,448	868,960
Anticipated Fuel Displaced for Heat (gallons)	0 (TBD)	0 (TBD)
Total Fuel displaced (gallons)	43,448	868,960
Anticipated Diesel Fuel Displaced for Power Generation (\$)	116,984 (first year) 132,957 (average)	2,659,140
Anticipated Fuel Displaced for Heat (\$)	0 (TBD)	0 (TBD)
Anticipated Power Generation O&M Cost Savings	0	0
Anticipated Thermal Generation O&M Cost Savings	n/a	n/a
Total Other costs savings (taxes, insurance, etc.)	0	0
Total Fuel, O&M, and Other Cost Savings	\$116,984	\$2,659,140

6.1.2 Economic Benefit

Explain the economic benefits of your project. Include direct cost savings and other economic benefits, and how the people of Alaska will benefit from the project. Note that additional revenuesources (such as tax credits or green tags) to pay for operations and/or financing, will not be included as economic benefits of the project.

Where appropriate, describe the anticipated energy cost in the community, or whatever will be affected by the project, over the life of the project. Explain how the forecast was developed and provide year-by-year forecasts

The economic model used by AEA is available at <https://www.akenergyauthority.org/What-We-Do/Grants-Loans/Renewable-Energy-Fund/2021-REF-Application>. This economic model may be used by applicants but is not required. The final benefit/cost ratio used will be derived from the AEA model to ensure a level playing field for all applicants. If used, please submit the model with the application.

The purpose of the proposed feasibility study and CDR is to assess technical and economic viability of wind infrastructure in Sample City.

The installation of a 300-kilowatt (kW) capacity system in Sample City is estimated to produce 630,000 kilowatt hours (kWh) annually. Based on this assumption, the possible displacement of diesel fuel used for electricity generation would be approximately 43,448 gallons per year. Using AEA's community fuel oil price projections, this project could save \$116,984 during the first year of operation. Over the life of the project, the estimated savings would be \$2,659,140. Please see the attached economic evaluation model in Tab G.

While the AEA evaluation model indicates the proposed project may not pay for itself in a 20-year life span, Utility 123 intends to utilize this intermediate phase of the project to identify an economically viable system for wind energy in Sample City. Savings could be enhanced with a possible phased capacity expansion following the initial design and installation of the proposed 300 kW system. A 300-kW wind energy system

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will only supply a portion of the existing energy demand in Sample City. Assuming wind proves to be a viable resource and the proposed 300 kW system is installed, Utility 123 will consider expanding upon the proposed system to meet a larger share of local energy demand. More information and analysis are needed to determine all project benefits.

Sample City qualifies for Alaska's power cost equalization program, providing economic assistance to communities with high energy costs and subsidized energy rates up to 500 kWh. The average annual price for residential electricity without PCE is \$0.57 per kilowatt hour (kWh) as of March 2020. This far exceeds the national benchmark. The residents of Sample City would benefit from this project as it would mitigate the volatile energy costs found in rural Alaska.

Immediate savings from this project will directly benefit Utility 123 and reduce Sample City's dependence on the PCE program. The high cost of energy is an extreme hardship for the low-income families of Sample City, even considering PCE credits. Un-subsidized energy costs are expected to decrease for residents and commercial entities in Sample City, providing immediate savings. Reduced energy costs for non-PCE community institutions may allow for increased or improved community or social services. Similarly, reduced energy costs for other non-PCE commercial energy customers such as stores that might pass along savings to residents.

The primary source of income for the majority of Sample City is from commercial fishing for herring and salmon. All fish processing is currently done in other communities. Local infrastructure offers limited jobs at the Sample City School, the Sample City and Utilities offices, the Tank Farm, the Village Corporation office, health clinic, Head Start, tribal councils, the U.S. Postal Service, and the two stores located in Sample City. Subsistence living combined with job scarcity is reflected in a high unemployment rate, approximately 36.2%, and low median household income of \$38,750 (based on 2018 American Community Survey 5-year estimates).

The Sample City Community Development Planning Board has identified many critical and long-term needs of the community. Many community-use buildings are old and heating them is inefficient. The high cost of electricity is a constraint to fulfilling the needs of maintenance, repair and development within the community. Stabilizing the rising costs of energy production would ease the burden felt by the residents and allow for progress in achievement of community goals.

Sources: Sample City Community Development Plan, Alaska Community Database

6.1.3 Economic Risks

Discuss potential issues that could make the project uneconomic to operate and how the project team will address the issues. Factors may include:

- Low prices for diesel and/or heating oil
- Other projects developed in community
- Reductions in expected energy demand: Is there a risk of an insufficient market for energy produced over the life of the project.
- Deferred and/or inadequate facility maintenance
- Other factors

Economic risks from this project are primarily from the high startup costs, and economic viability is dependent on successful implementation and operation of wind energy infrastructure over a 20- year lifetime. Wind energy has proven an economically viable option for multiple communities in the Sample region, including the nearby villages of Village A and Village B.

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AEA projections suggest the cost of fuel in Sample City to increase for the foreseeable future, suggesting costs for continued dependence on diesel powered electricity in Sample City could become prohibitive. With implementation of wind energy, energy costs will likely stabilize and help to ensure jobs in the community and a reliable energy market. Success of this project is dependent on maintenance of the existing energy infrastructure and the distribution system. Sample City has a complete and thorough process for tracking and maintaining energy infrastructure in all communities the cooperative serves.

6.1.4 Public Benefit for Projects with Direct Private Sector Sales

For projects that include direct sales of power to private sector businesses (sawmills, cruise ships, mines, etc.), please provide a brief description of the direct and indirect public benefits derived from the project as well as the private sector benefits and complete the table below. See Section 1.6 in the Request for Applications for more information.

Not applicable to this project.

Renewable energy resource availability (kWh per month)	
Estimated direct sales to private sector businesses (kWh)	
Revenue for displacing diesel generation for use at private sector businesses (\$)	
Estimated sales for use by the Alaskan public (kWh)	
Revenue for displacing diesel generation for use by the Alaskan public (\$)	

6.2 Other Public Benefit

Describe the non-economic public benefits to Alaskans over the lifetime of the project. For the purpose of evaluating this criterion, public benefits are those benefits that would be considered unique to a given project and not generic to any renewable resource. For example, decreased greenhouse gas emission, stable pricing of fuel source, won't be considered under this category.

Some examples of other public benefits include:

- *The project will result in developing infrastructure (roads, trails, pipes, power lines, etc.) that can be used for other purposes*
- *The project will result in a direct long-term increase in jobs (operating, supplying fuel, etc.)*
- *The project will solve other problems for the community (waste disposal, food security, etc.)*
- *The project will generate useful information that could be used by the public in other parts of the state*
- *The project will promote or sustain long-term commercial economic development for the community*

Other public benefits from the proposed project include providing a reliable renewable resource would benefit all of Alaskans as it mitigates potential hazardous environmental incidents that could threaten water and land resources. Implementing wind infrastructure and reducing dependency on diesel powered electricity will reduce the potential for fuel spills or contamination, improve air quality, and decrease reliance on fossil fuels. Wind energy supports the Sample City Community Vision: "Protect subsistence, the environment and our Culture while improving our livelihood."

Data from this project will provide important information regarding wind resources in rural Alaska to be applied in future projects.

Sample City is an isolated village that relies on air transportation for many essential resources. Reliable electric service is essential to maintaining vital navigation aids for the safe operation of aircraft. Runway

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lights, automated weather observation stations, VASI lights, DME's and VOR's are all powered by electricity. This project could lead to lower airport operating costs.

Emergency medical service (EMS) is provided in a health clinic by a health aide and a Sample City volunteer fire and EMS response team. Medical problems and emergencies must be relayed by telephone or by some other communication means for outside assistance, requiring electricity. Operation of the health clinic and medical equipment is also dependent on an affordable electric service, which a wind system in Sample City could provide.

Like all of Alaska, Sample City is subject to long periods of darkness. Reliable electric service is essential for the operation of home lighting, streetlights, and security lighting. Outside lighting greatly improves the safety of village residents. This project could help reduce the costs associated with lighting the community, which could leave more funds available for other community programs and infrastructure.

SECTION 7 – SUSTAINABILITY

Describe your plan for operating the completed project so that it will be sustainable throughout its economic life.

At a minimum for construction projects, a business and operations plan should be attached and the applicant should describe how it will be implemented. See Section 11.

7.1.1 Operation and Maintenance

Demonstrate the capacity to provide for the long-term operation and maintenance of the proposed project for its expected life

- Provide examples of success with similar or related long-term operations
- Describe the key personnel that will be available for operating and maintaining the infrastructure.
- Describe the training plan for existing and future employees to become proficient at operating and maintaining the proposed system.
- Describe the systems that will be used to track necessary supplies
- Describe the system will be used to ensure that scheduled maintenance is performed

As a local utility that has been in operation since 19XX, Utility 123 is completely able to finance, operate, and maintain this project for the design life. Utility 123 has capacity and experience to operate this project. Utility 123 has operating wind projects throughout the state and is very familiar with planning, constructing, operating, and maintaining wind systems. See section 10 for a complete discussion of Utility 123's success with similar or related long-term operations.

Utility 123 has a large and geographically diverse staff capable of operating and maintaining energy infrastructure. Immediate tasks during this project phase include operation and maintenance of the met tower, coordinated between Utility 123 and a local-hire technician. Utility 123 will follow established and proven protocols for training existing and future employees to operate and maintain the proposed system. Throughout Utility 123's time as a leading energy cooperative, Utility 123 has had success with training and onboarding for multiple comparable wind energy infrastructure projects in Alaska.

Utility 123 will use tracking protocols already in practice to track necessary supplies for the proposed feasibility study and conceptual design report, along with any subsequent project phases.

Should wind power prove a viable resource in Sample City and Utility 123 successfully implements wind energy infrastructure, local wind turbine(s) would be incorporated into Utility 123's established and proven power plant operation and maintenance system. Local plant operators provide daily servicing. Utility 123 technicians provide periodic preventative or corrective maintenance and are supported by Utility 123 headquarters staff, purchasing, and warehousing.

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7.1.2 Financial Sustainability

- Describe the process used (or propose to use) to account for operational and capital costs.
- Describe how rates are determined (or will be determined). What process is required to set rates?
- Describe how you ensure that revenue is collected.
- If you will not be selling energy, explain how you will ensure that the completed project will be financially sustainable for its useful life.

Utility 123 has well established and proven processes in place to account for operation and capital costs, setting rates, ensuring revenue is collected, and maintaining financial sustainability of infrastructure over their operational lives. The costs of operations and maintenance of the proposed project would be funded through ongoing energy sales. Different turbines have different operating costs; however, using AEA's default cost of O&M for rural wind energy, estimated O&M for this project is would cost \$31,500 annually (assuming Utility 123's own justified standard of \$0.050/kWh for wind energy).

Commitment to reporting the savings and benefits: Utility 123 is fully committed to sharing the savings and benefits information accrued from this project with its member owners and with AEA.

7.1.2.1 Revenue Sources

Briefly explain what if any effect your project will have on electrical rates in the proposed benefit area over the life of the project. If there is expected to be multiple rates for electricity, such as a separate rate for intermittent heat, explain what the rates will be and how they will be determined

Collect sufficient revenue to cover operational and capital costs

- What is the expected cost-based rate (as consistent with RFA requirements)
- If you expect to have multiple rate classes, such as excess electricity for heat, explain what those rates are expected to be and how those rates account for the costs of delivering the energy (see AEA's white paper on excess electricity for heat).
- Annual customer revenue sufficient to cover costs
- Additional incentives (i.e. tax credits)
- Additional revenue streams (i.e. green tag sales or other renewable energy subsidies or programs that might be available)

Given that this project is in the concept design stage, revenue and incentives are unknown. Tax credits are not expected to be beneficial to the project due to Utility 123's status as a non-profit entity. Nonetheless, in addition to saving the direct cost of fuel, Utility 123 could sell green tags from the project.

7.1.2.2 Power Purchase/Sale

The power purchase/sale information should include the following:

- Identification of potential power buyer(s)/customer(s)
- Potential power purchase/sales price - at a minimum indicate a price range (consistent with the Section 3.16 of the RFA)

Identify the potential power buyer(s)/customer(s) and anticipated power purchase/sales price range. Indicate the proposed rate of return from the grant-funded project. Include letters of support or power purchase agreement from identified customers.

Identification of potential power buyer(s)/customer(s): Utility 123, the existing electric utility serving Sample City, is a member-owned cooperative electric utility and owns and maintains the generation, fuel storage, and distribution facilities in the villages it serves. No power purchase or sales agreements would be

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needed for this project.

Sample City has approximately 120 households and a health clinic, city office, school, and water treatment plant/washeteria, which purchase power from Utility 123.

Potential power purchase/sales price: At this point in project development, the potential power price and rate of return on the project is unknown. Work done under this grant would determine this information.

SECTION 8 – PROJECT READINESS

8.1 Project Preparation

Describe what you have done to prepare for this award and how quickly you intend to proceed with work once your grant is approved.

Specifically address your progress towards or readiness to begin, at a minimum, the following:

- The phase(s) that must be completed prior to beginning the phase(s) proposed in this application
- The phase(s) proposed in this application
- Obtaining all necessary permits
- Securing land access and use for the project
- Procuring all necessary equipment and materials

Refer to the RFA and/or the pre-requisite checklists for the required activities and deliverables for each project phase. Please describe below and attach any required documentation.

Utility 123 will take steps to prepare a met tower for delivery and identify a location for its installation before the AEA REF Grant is to be awarded to ensure project readiness. Utility 123 has term agreements with engineering and wind consultants, which will allow work to begin on the wind analysis and CDR quickly. FAA permitting process is to be completed by the time this grant is awarded.

Once funding is known to be secured, Utility 123 would seek a lease for the met tower, and begin the environmental permitting process. Utility 123 would seek contractors to install the met tower and complete the geotechnical work once the grant agreement is in place.

Met tower installation and geotechnical work would occur before winter. Work that can be completed before the wind study is completed would occur over the winter, including analysis of current cost of energy and future market, and the economic and financial analyses. Once the wind study is completed, the conceptual design and permitting would occur.

The geotechnical work would be completed under the direction of the engineering consultants, which have completed this type of work in the past. This would enable the geotechnical field effort to occur before winter.

Furthermore, Sample City residents are energized by the idea of a wind project in their community and are prepared to work with Utility 123 on land agreements. With the wind analysis, geotechnical data, and site selection in hand, completion of the CDR would be seamless. No other grants have been secured for this work in the past.

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8.2 Demand- or Supply-Side Efficiency Upgrades

If you have invested in energy efficiency projects that will have a positive impact on the proposed project, and have chosen to not include them in the economic analysis, applicants should provide as much documentation as possible including:

1. Explain how it will improve the success of the RE project
2. Energy efficiency pre and post audit reports, or other appropriate analysis,
3. Invoices for work completed,
4. Photos of the work performed, and/or
5. Any other available verification such as scopes of work, technical drawings, and payroll for work completed internally.

Not applicable to this project

SECTION 9 – LOCAL SUPPORT AND OPPOSITION

Describe local support **and opposition**, known or anticipated, for the project. **Include letters, resolutions, or other documentation** of local support from the community that would benefit from this project. Provide letters of support, memorandum of understandings, cooperative agreements between the applicant, the utility, local government and project partners. The documentation of support must be dated within one year of the RFA date of July 20, 2020. Please note that letters of support from legislators will not count toward this criterion.

The community is very committed to moving this project forward and fully supports evaluating wind energy as a viable option for sustainable energy infrastructure in the community. Letters of support for this project have been received from the Sample City, the Sample City Tribal Corporation and the Tribal Councils of Sample City.

SECTION 10 – COMPLIANCE WITH OTHER AWARDS

Identify other grants that may have been previously awarded to the Applicant by AEA for this or any other project. Describe the degree you have been able to meet the requirements of previous grants including project deadlines, reporting, and information requests.

Utility 123 has been providing electrical services to rural, isolated, and economically-disadvantaged Alaskan communities since 1968. The Cooperative began with three communities and a very small staff, and has steadily grown to the impressive non-profit organization it is today, with 58-member villages. Utility 123 started out with loans from the USDA RUS, and became a Denali Commission partner in 2001. Utility 123 now has over 90 employees. There are generation technicians, linemen, managers, engineers, expeditors, and others in its central office in Anchorage, and plant operators within member communities. With the signatures on this application, Utility 123 certifies that it is a legally incorporated, non-profit entity eligible to receive federal grant funding for the proposed project. Documentation of incorporation is available upon request.

Utility 123 has the largest geographic service area of any retail electric cooperative in world. It has demonstrated non-stop dedication to bringing stable and efficient sources of electricity to homes, schools, clinics, water and sewer systems, businesses, and communications infrastructure in its member villages. Utility 123 operates 170 diesel generators throughout its service area and purchases over 8 million gallons of fuel annually. The generators produce electric power for member communities, running a cumulative total of more than 375,000 hours per year. In 2019, Utility 123 generated 119 million kWh in power sales.

**ECONOMIST TO ASSIST IN THE REVIEW OF ALASKA
RENEWABLE ENERGY FUND APPLICATIONS**

Each of Utility 123's villages conducts an annual village meeting for the express purpose of electing a delegate to represent their community at Utility 123's Annual Cooperative Meeting held in Anchorage each March. At the Annual Meeting, the delegates discuss Utility 123 business and elect members to serve on the seven-member board of directors. Utility 123 and the local governments operate as a partnership. Under operating agreements with all member communities, local control is exercised. The village governments hire the plant operators and oversee the day-to-day operation of power generation plants.

The Utility 123 Board of Directors and staff are committed to the on-going effort of increasing the efficiencies and effectiveness of power-producing facilities and distribution lines in all member villages. They believe that by improving the power generation and distribution in each community, they are helping to improve the future of all impacted residents.

Since 2000, Utility 123 has reliably and responsibly spent over \$295 million of grant funds and its own money to construct over 120 major projects. This includes 35 bulk fuel tank farm upgrades or replacements, 18 new diesel-fired power plants, 7 standby backup power plants, 10 recovered heat systems, 14 wind farms (32 total wind turbines), 8 village-to-village interties, 1 photovoltaic (PV) solar array, and 31 other generation and distribution upgrades. Funding for these projects has come from the Alaska Energy Authority (\$38 million), the Denali Commission (\$223 million), USDA RUS direct awards (\$13 million), USDE Office of Indian Energy (\$3 million), other grants (\$17 million), and Utility 123 matching contributions (\$31 million).

Utility 123 has been awarded over 35 AEA grants, details for these grants are attached in Tab G.

SECTION 11 – LIST OF SUPPORTING DOCUMENTATION FOR PRIOR PHASES

In the space below, please provide a list of additional documents attached to support completion of prior phases.

Not applicable to this project.

SECTION 12 – LIST OF ADDITIONAL DOCUMENTATION SUBMITTED FOR CONSIDERATION

In the space below, please provide a list of additional information submitted for consideration.

REF Round 13 Economic Evaluation Model; Sample City AEA Grant Summary

Application [#]: Application Title

<u>Benefit/Cost Ratio:</u>	<u>Applicant:</u>	<u>AEA Recommended:</u>
[Additional if sensitivity analysis completed]		

ATTACHMENT 8 – SAMPLE REF ECONOMIC EVALUATION – AEA MODEL

Benefit-Cost Calculation: Using Applicant Provided Inputs

Renewable Energy Fund Economic Benefit-Cost Analysis Model			
NOTICE: By default, this sheet is locked. If you need to unlock the sheet go to "Review" in ribbon bar, select "Unprotect Sheet", then input passcode: REFRound13			
Project Description			
Community			<--Input
Nearest Fuel Community	Kotlik		<--Input
Region	Rural		<--Input
RE Technology	Wind		<--Input
Project ID	13003		<--Input
Applicant Name	Utility 123		<--Input
Project Title	Sample City Wind Energy Feasibility and Conceptual Design Project		<--Input
Results			
NPV Benefits		\$1,792,755.22	<--Calculation
NPV Capital Costs		\$2,860,481	<--Calculation
B/C Ratio		0.63	<--Calculation
NPV Net Benefit		(\$1,067,726)	<--Calculation
Performance			
	Unit	Value	
Displaced Electricity	kWh per year	630,000	<--Calculation
Displaced Electricity	total lifetime kWh	12,600,000	<--Calculation
Displaced Petroleum Fuel	gallons per year	43,448	<--Calculation
Displaced Petroleum Fuel	total lifetime gallons	868,966	<--Calculation
Displaced Natural Gas	MCF per year	-	<--Calculation
Displaced Natural Gas	total lifetime MCF	-	<--Calculation
Avoided CO2	tonnes per year	441	<--Calculation
Avoided CO2	total lifetime tonnes	8,820	<--Calculation
Proposed System			
	Unit	Value	
Capital Costs	\$	\$ 3,100,000	<--Calculation
Project Start	year	2024	<--Input
Project Life	years	20	<--Input
Displaced Electric	kWh per year	630,000	<--Input
Displaced Heat	gallons displaced per year		<--Input
Renewable Generation O&M (Electric)	\$ per year	31,500	<--Input
Renewable Generation O&M (Heat)	\$ per year		<--Input
Diesels OFF time	Hours per year		<--Input
Electric Capacity	kW	300	<--Input
Electric Capacity Factor	%	24%	<--Calculation
Heating Capacity	Btu/hr		<--Input
Heating Capacity Factor	%	#DIV/0!	<--Calculation
Total Other Public Benefit	2020\$ (Total over the life of the project)	0	<--Calculation
Base System			
	Size of impacted engines (select from list)	\$/hr	
Diesel Generator O&M		FALSE	REFERENCE: '999-Calc'
Applicant's Diesel Generator Efficiency	kWh per gallon	12.89	<--Input
Diesel Generation Efficiency	Total current annual diesel generation	kWh/gallon	
	2,010,362	14.50	<--Calculation

Annual Cost Savings			Units	2020	2021	2022	2023	2024	2025	2026
Entered Value	Project Capital Cost	\$ per year			\$ 250,000	\$ 350,000	\$ 2,500,000			
CALCULATION	Electric Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 116,984	\$ 119,987	\$ 122,164
CALCULATION	Heating Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year								
CALCULATION	Total Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 116,984	\$ 119,987	\$ 122,164
CALCULATION	Net Benefit	\$ per year		\$ -	\$ (250,000)	\$ (350,000)	\$ (2,500,000)	\$ 116,984	\$ 119,987	\$ 122,164
Electric			Units	2020	2021	2022	2023	2024	2025	2026
Proposed										
Enter Value if generation changes	Renewable Generation	kWh per year		-	-	-	-	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year								
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 31,500	\$ 31,500	\$ 31,500
Entered Value	Renewable Electric Other costs	\$ per year								
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons								
Entered Value	Renewable Fuel Cost	\$ per unit								
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 31,500	\$ 31,500	\$ 31,500
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year		-	-	-	-	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon		\$ 3.13	\$ 3.18	\$ 3.27	\$ 3.33	\$ 3.42	\$ 3.49	\$ 3.54
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year		-	-	-	-	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 148,484	\$ 151,487	\$ 153,664
CALCULATION	Base Generation Displaced Cost	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 148,484	\$ 151,487	\$ 153,664

Annual Cost Savings			Units	2027	2028	2029	2030	2031	2032	2033
Entered Value	Project Capital Cost	\$ per year								
CALCULATION	Electric Cost Savings	\$ per year		\$ 124,219	\$ 126,155	\$ 127,975	\$ 129,681	\$ 131,275	\$ 132,758	\$ 134,132
CALCULATION	Heating Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year								
CALCULATION	Total Cost Savings	\$ per year		\$ 124,219	\$ 126,155	\$ 127,975	\$ 129,681	\$ 131,275	\$ 132,758	\$ 134,132
CALCULATION	Net Benefit	\$ per year		\$ 124,219	\$ 126,155	\$ 127,975	\$ 129,681	\$ 131,275	\$ 132,758	\$ 134,132
Electric			Units	2027	2028	2029	2030	2031	2032	2033
Proposed										
Enter Value if generation changes	Renewable Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year								
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year		\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500
Entered Value	Renewable Electric Other costs	\$ per year								
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons								
Entered Value	Renewable Fuel Cost	\$ per unit								
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year		\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon		\$ 3.58	\$ 3.63	\$ 3.67	\$ 3.71	\$ 3.75	\$ 3.78	\$ 3.81
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year		43,448	43,448	43,448	43,448	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year		\$ 155,719	\$ 157,655	\$ 159,475	\$ 161,181	\$ 162,775	\$ 164,258	\$ 165,632
CALCULATION	Base Generation Displaced Cost	\$ per year		\$ 155,719	\$ 157,655	\$ 159,475	\$ 161,181	\$ 162,775	\$ 164,258	\$ 165,632

Annual Cost Savings			Units	2034	2035	2036	2037	2038	2039	2040
Entered Value	Project Capital Cost	\$ per year								
CALCULATION	Electric Cost Savings	\$ per year		\$ 135,399	\$ 136,559	\$ 137,615	\$ 138,567	\$ 139,416	\$ 140,162	\$ 140,807
CALCULATION	Heating Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year								
CALCULATION	Total Cost Savings	\$ per year		\$ 135,399	\$ 136,559	\$ 137,615	\$ 138,567	\$ 139,416	\$ 140,162	\$ 140,807
CALCULATION	Net Benefit	\$ per year		\$ 135,399	\$ 136,559	\$ 137,615	\$ 138,567	\$ 139,416	\$ 140,162	\$ 140,807
Electric			Units	2034	2035	2036	2037	2038	2039	2040
Proposed										
Enter Value if generation changes	Renewable Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year								
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year		\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500
Entered Value	Renewable Electric Other costs	\$ per year								
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons								
Entered Value	Renewable Fuel Cost	\$ per unit								
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year		\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500	\$ 31,500
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon		\$ 3.84	\$ 3.87	\$ 3.89	\$ 3.91	\$ 3.93	\$ 3.95	\$ 3.97
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year		43,448	43,448	43,448	43,448	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year		\$ 166,899	\$ 168,059	\$ 169,115	\$ 170,067	\$ 170,916	\$ 171,662	\$ 172,307
CALCULATION	Base Generation Displaced Cost	\$ per year		\$ 166,899	\$ 168,059	\$ 169,115	\$ 170,067	\$ 170,916	\$ 171,662	\$ 172,307

Annual Cost Savings		Units	2041	2042	2043
Entered Value	Project Capital Cost	\$ per year			
CALCULATION	Electric Cost Savings	\$ per year	\$ 141,351	\$ 141,795	\$ 142,139
CALCULATION	Heating Cost Savings	\$ per year	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year			
CALCULATION	Total Cost Savings	\$ per year	\$ 141,351	\$ 141,795	\$ 142,139
CALCULATION	Net Benefit	\$ per year	\$ 141,351	\$ 141,795	\$ 142,139
Electric		Units	2041	2042	2043
Proposed					
Enter Value if generation changes	Renewable Generation	kWh per year	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year			
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year	\$ 31,500	\$ 31,500	\$ 31,500
Entered Value	Renewable Electric Other costs	\$ per year			
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons			
Entered Value	Renewable Fuel Cost	\$ per unit			
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year	\$ 31,500	\$ 31,500	\$ 31,500
Base					
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon	\$ 3.98	\$ 3.99	\$ 4.00
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year	\$ 172,851	\$ 173,295	\$ 173,639
CALCULATION	Base Generation Displaced Cost	\$ per year	\$ 172,851	\$ 173,295	\$ 173,639

BENEFIT-COST CALCULATION: CONSULTANT ECONOMIST ADJUSTMENT USING AEA MODEL INPUT

Renewable Energy Fund Economic Benefit-Cost Analysis Model			
NOTICE: By default, this sheet is locked. If you need to unlock the sheet go to "Review" in ribbon bar, select "Unprotect Sheet", then input passcode: REFRound13			
Project Description			
Community			<--Input
Nearest Fuel Community	Kotlik		<--Input
Region	Rural		<--Input
RE Technology	Wind		<--Input
Project ID	13003		<--Input
Applicant Name	Utility 123		<--Input
Project Title	Sample City Wind Energy Feasibility and Conceptual Design Project		<--Input
Results			
NPV Benefits	\$1,102,474.87		<--Calculation
NPV Capital Costs	\$4,333,859		<--Calculation
B/C Ratio	0.25		<--Calculation
NPV Net Benefit	(\$3,231,384)		<--Calculation
Performance			
	Unit	Value	
Displaced Electricity	kWh per year	630,000	<--Calculation
Displaced Electricity	total lifetime kWh	12,600,000	<--Calculation
Displaced Petroleum Fuel	gallons per year	43,448	<--Calculation
Displaced Petroleum Fuel	total lifetime gallons	868,966	<--Calculation
Displaced Natural Gas	MCF per year	-	<--Calculation
Displaced Natural Gas	total lifetime MCF	-	<--Calculation
Avoided CO2	tonnes per year	441	<--Calculation
Avoided CO2	total lifetime tonnes	8,820	<--Calculation
Proposed System			
	Unit	Value	
Capital Costs	\$	\$ 4,710,000	<--Calculation
Project Start	year	2024	<--Input
Project Life	years	20	<--Input
Displaced Electric	kWh per year	630,000	<--Input
Displaced Heat	gallons displaced per year		<--Input
Renewable Generation O&M (Electric)	\$ per year	82,200	<--Input
Renewable Generation O&M (Heat)	\$ per year		<--Input
Diesels OFF time	Hours per year		<--Input
Electric Capacity	kW	300	<--Input
Electric Capacity Factor	%	24%	<--Calculation
Heating Capacity	Btu/hr		<--Input
Heating Capacity Factor	%	#DIV/0!	<--Calculation
Total Other Public Benefit	2020\$ (Total over the life of the project)	0	<--Calculation
Base System			
	Size of impacted engines (select from list)	\$/hr	
Diesel Generator O&M		FALSE	REFERENCE: '999-Calc'
Applicant's Diesel Generator Efficiency	kWh per gallon	12.74	<--Input
Diesel Generation Efficiency	Total current annual diesel generation	kWh/gallon	
	2,010,362	14.50	<--Calculation

Annual Cost Savings			Units	2020	2021	2022	2023	2024	2025	2026
Entered Value	Project Capital Cost	\$ per year			\$ 250,000	\$ 350,000	\$ 4,110,000			
CALCULATION	Electric Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 66,284	\$ 69,287	\$ 71,464
CALCULATION	Heating Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year								
CALCULATION	Total Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 66,284	\$ 69,287	\$ 71,464
CALCULATION	Net Benefit	\$ per year		\$ -	\$ (250,000)	\$ (350,000)	\$ (4,110,000)	\$ 66,284	\$ 69,287	\$ 71,464
Electric			Units	2020	2021	2022	2023	2024	2025	2026
Proposed										
Enter Value if generation changes	Renewable Generation	kWh per year		-	-	-	-	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year								
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 82,200	\$ 82,200	\$ 82,200
Entered Value	Renewable Electric Other costs	\$ per year								
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons								
Entered Value	Renewable Fuel Cost	\$ per unit								
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 82,200	\$ 82,200	\$ 82,200
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year		-	-	-	-	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon		\$ 3.13	\$ 3.18	\$ 3.27	\$ 3.33	\$ 3.42	\$ 3.49	\$ 3.54
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year		-	-	-	-	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 148,484	\$ 151,487	\$ 153,664
CALCULATION	Base Generation Displaced Cost	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ 148,484	\$ 151,487	\$ 153,664

Annual Cost Savings			Units	2027	2028	2029	2030	2031	2032	2033
Entered Value	Project Capital Cost	\$ per year								
CALCULATION	Electric Cost Savings	\$ per year		\$ 73,519	\$ 75,455	\$ 77,275	\$ 78,981	\$ 80,575	\$ 82,058	\$ 83,432
CALCULATION	Heating Cost Savings	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year								
CALCULATION	Total Cost Savings	\$ per year		\$ 73,519	\$ 75,455	\$ 77,275	\$ 78,981	\$ 80,575	\$ 82,058	\$ 83,432
CALCULATION	Net Benefit	\$ per year		\$ 73,519	\$ 75,455	\$ 77,275	\$ 78,981	\$ 80,575	\$ 82,058	\$ 83,432
Electric			Units	2027	2028	2029	2030	2031	2032	2033
Proposed										
Enter Value if generation changes	Renewable Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year								
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year		\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200
Entered Value	Renewable Electric Other costs	\$ per year								
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons								
Entered Value	Renewable Fuel Cost	\$ per unit								
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year		\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year		630,000	630,000	630,000	630,000	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon		\$ 3.58	\$ 3.63	\$ 3.67	\$ 3.71	\$ 3.75	\$ 3.78	\$ 3.81
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year		43,448	43,448	43,448	43,448	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year		\$ 155,719	\$ 157,655	\$ 159,475	\$ 161,181	\$ 162,775	\$ 164,258	\$ 165,632
CALCULATION	Base Generation Displaced Cost	\$ per year		\$ 155,719	\$ 157,655	\$ 159,475	\$ 161,181	\$ 162,775	\$ 164,258	\$ 165,632

Annual Cost Savings			Units	2034	2035	2036	2037	2038	2039	2040
Entered Value	Project Capital Cost		\$ per year							
CALCULATION	Electric Cost Savings		\$ per year	\$ 84,699	\$ 85,859	\$ 86,915	\$ 87,867	\$ 88,716	\$ 89,462	\$ 90,107
CALCULATION	Heating Cost Savings		\$ per year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits		\$ per year							
CALCULATION	Total Cost Savings		\$ per year	\$ 84,699	\$ 85,859	\$ 86,915	\$ 87,867	\$ 88,716	\$ 89,462	\$ 90,107
CALCULATION	Net Benefit		\$ per year	\$ 84,699	\$ 85,859	\$ 86,915	\$ 87,867	\$ 88,716	\$ 89,462	\$ 90,107
Electric			Units	2034	2035	2036	2037	2038	2039	2040
Proposed										
Enter Value if generation changes	Renewable Generation		kWh per year	630,000	630,000	630,000	630,000	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)		\$ per year							
REFERENCE: Cell D34	Renewable O&M (Electric)		\$ per year	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200
Entered Value	Renewable Electric Other costs		\$ per year							
Entered Value	Renewable Fuel Use Quantity (Biomass)		green tons							
Entered Value	Renewable Fuel Cost		\$ per unit							
CALCULATION	Total Renewable Fuel Cost (Electric)		\$ per year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)		\$ per year	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200	\$ 82,200
Base										
REFERENCE: Cell D32	Displaced Fossil Fuel Generation		kWh per year	630,000	630,000	630,000	630,000	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price		\$ per gallon	\$ 3.84	\$ 3.87	\$ 3.89	\$ 3.91	\$ 3.93	\$ 3.95	\$ 3.97
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)		\$ per year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M		\$ per year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use		gallons per year	43,448	43,448	43,448	43,448	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost		\$ per year	\$ 166,899	\$ 168,059	\$ 169,115	\$ 170,067	\$ 170,916	\$ 171,662	\$ 172,307
CALCULATION	Base Generation Displaced Cost		\$ per year	\$ 166,899	\$ 168,059	\$ 169,115	\$ 170,067	\$ 170,916	\$ 171,662	\$ 172,307

Annual Cost Savings		Units	2041	2042	2043
Entered Value	Project Capital Cost	\$ per year			
CALCULATION	Electric Cost Savings	\$ per year	\$ 90,651	\$ 91,095	\$ 91,439
CALCULATION	Heating Cost Savings	\$ per year	\$ -	\$ -	\$ -
Entered Value	Other Public Benefits	\$ per year			
CALCULATION	Total Cost Savings	\$ per year	\$ 90,651	\$ 91,095	\$ 91,439
CALCULATION	Net Benefit	\$ per year	\$ 90,651	\$ 91,095	\$ 91,439
Electric		Units	2041	2042	2043
Proposed					
Enter Value if generation changes	Renewable Generation	kWh per year	630,000	630,000	630,000
Entered Value	Renewable scheduled replacement(s) (Electric)	\$ per year			
REFERENCE: Cell D34	Renewable O&M (Electric)	\$ per year	\$ 82,200	\$ 82,200	\$ 82,200
Entered Value	Renewable Electric Other costs	\$ per year			
Entered Value	Renewable Fuel Use Quantity (Biomass)	green tons			
Entered Value	Renewable Fuel Cost	\$ per unit			
CALCULATION	Total Renewable Fuel Cost (Electric)	\$ per year	\$ -	\$ -	\$ -
	Proposed Generation Cost (Electric)	\$ per year	\$ 82,200	\$ 82,200	\$ 82,200
Base					
REFERENCE: Cell D32	Displaced Fossil Fuel Generation	kWh per year	630,000	630,000	630,000
REFERENCE: Worksheet 'Diesel Fuel Prices'	Displaced Fuel Price	\$ per gallon	\$ 3.98	\$ 3.99	\$ 4.00
Enter Value if Diesels are OFF	Displaced Scheduled component replacement(s)	\$ per year	\$ -	\$ -	\$ -
CALCULATION	Displaced O&M	\$ per year	\$ -	\$ -	\$ -
CALCULATION	Displaced Fuel Use	gallons per year	43,448	43,448	43,448
CALCULATION	Displaced Fuel Cost	\$ per year	\$ 172,851	\$ 173,295	\$ 173,639
CALCULATION	Base Generation Displaced Cost	\$ per year	\$ 172,851	\$ 173,295	\$ 173,639