**Full Project Proposal**

**ERA Expanded Technologies Pilot**

**Version 3: October 5, 2021**

1. Proposal Information

|  |  |
| --- | --- |
| Project Title: | [create a title for the Project for reference only] |
| Lead Applicant Organization: | [proper legal name of entity who, if successful, will enter into a funding agreement (Contribution Agreement) with ERA] |
| Lead Applicant Contact Name and Email: | [Lead Applicant contact information] |
| Project Partner Organization(s): | [list all applicable Project Partner entities using their proper legal names] |
| Proposed Technology System(s): | [key Technology System(s) to be used in the Project] |
| Project Start Date (YYYY/MM/DD): | [anticipated date all Project activities will begin] |
| Project Completion Date (YYYY/MM/DD): | [anticipated date all Project activities will be complete] |
| Estimated Total Eligible Expenses ($): | [total Eligible Expenses as calculated below] |
| Requested ERA Funding ($): | [ERA funding request as defined below] |

**INSTRUCTIONS**:

* All text in red is provided for your guidance and should be deleted prior to Proposal submission.
* Complete this proposal based on the instructions provided here and in the Expanded Technologies Pilot (ETP) Guidelines available on the [website](https://eralberta.ca/energy-savings-for-business/expanded-technologies-pilot/).
* This document must be submitted using the [ERIMS Platform](https://erims.outcome-plus.com).
* Save the document title as: *[Insert Lead Applicant Name] – Full Project Proposal.*
* All sections in this proposal are mandatory.
* This Proposal must be written entirely in English.
* Do not remove or modify any portions of the Full Project Proposal, except where instructed.
* This Proposal must be uploaded in word or PDF format and must be converted directly from the response template -- do not print and scan to PDF.
* This Proposal must be 15 pages or less in length, including all text, graphics, tables, etc. Any extra pages beyond the limit will be removed from the document and will not be considered by the evaluators.
* Only one document may be uploaded per submission. Once the Applicant has pressed submit on their Application in ERIMS the FPP will be locked and the Applicant will be unable to edit it while ERA reviews and evaluates the Project.
* If you have any questions, please contact the ESB Team at [ETP@esbprogram.ca](mailto:ETP@esbprogram.ca).

1. Base Case and Project Description

**Base Case Description**

The base case represents the ‘business-as-usual’ alternative to the Technology System(s) proposed in the Project. This description should reflect standard practices for similar facilities and/or minimums required by codes, standards, or regulations, and should be a fair representation of existing operating conditions.

Please describe the base case equipment including a description of:

* The existing equipment the proposed Technology System(s) will be replacing.
* The scope of installations and all major technologies or components currently in use.
* How the base case equipment is typically integrated within facilities.

Insert content here (text, figures, tables, etc.).

**Proposed Project Overview**

Please provide an overview of the proposed Project, including a description of:

* The scope of installations (e.g., number of systems or products, scale, facility type and location of installations, etc.).
* A description of all major Technology System(s) or components to be used within the Project.
* Description of the Project boundary, with the boundary itself drawn as closely as possible to the isolated Technology System(s) being installed, such that it captures affected energy inputs and outputs affected by the base case and project.
* For projects that propose use of alternative fuel sources beyond utility natural gas and grid electricity (e.g., hydrogen, biofuels, etc.), the boundary may need to be expanded to include aspects of fuel consumption. If you have any questions regarding how best to define the boundary, please review the Guidelines and contact us in advance<mailto:>.
* How the proposed system will be integrated in the facility or facilities comprising the Project Location(s).
* Any major differences in operation or output between the proposed Technology System(s) and the base case.
* The mechanism(s) by which on-site energy consumption, GHG emissions, or both are reduced relative to the base case.
* Confirmation that the Project is not standard practice or business as usual in the settings described in the proposal.
* Confirmation that the Project and proposed Facility or Facilities where the Technology System(s) will be installed meet the eligibility criteria outlined in the ETP Guidelines and note if this has changed since the EOI was submitted.

Please note: ERA will only fund one Full Project Proposal of each Technology System(s) type with some exceptions. ERA will consider whether other projects similar to the proposed Project have already been funded through ETP and whether the measure fits within the existing measure list. View the webpage for more details on Projects that have been awarded funding and contact [ETP@esbprogram.ca](mailto:ETP@esbprogram.ca) if you have any questions about your Technology System(s).

Insert content here (text, figures, tables, etc.).

1. Preliminary Greenhouse Gas (GHG) reductions model

ERA will be evaluating the proposed Project’s potential to generate cost-effective GHG reductions and energy savings in Alberta over the Technology System(s) lifetime. The level of detail and rigour of the model and analysis should be proportionate with the scale and complexity of the proposed Project. ERA will be seeking confidence that the model reasonably and accurately portrays the GHG emissions reduction potential of the proposed Technology System(s). Please clearly document assumptions, methodologies, performance specifications, and emissions factors. To support your analysis include:

* The scope of the GHG methodology applies only to the operational life of the Technology System(s). Emissions associated with the production of the materials, shipping, and disposal or recycling of materials is assumed to be outside of the scope and are not required to be included in the quantification.
* A spreadsheet-based model or equivalent that estimates the GHG emissions reduction for the Technology System(s) is desired. The model must incorporate the existing and forecasted operating profiles and show the formulas to calculate the savings and measured values for the current operating profile and extrapolate to the forecasted operating profile for the life of the Technology System(s).
* If you are installing your Technology System(s) in multiple facilities and the GHG models are significantly different for each base case scenario, please include these models in separate documents.
* Use metric tonnes units (i.e., 1,000 kg)
* Use units of GJ for all energy types.
* Note: it is understood that results may be updated or may vary based on experience or information gained from participating in the ETP Program and once all final equipment and parameters are known. This can be updated in the Project Completion Documentation or following any proposed measurement or verification.

Additional data, analysis, or verification may be requested for successful projects as part the funding agreement to validate assumptions and/or otherwise improve ERA’s understanding of the Technology System(s).

**Base case Energy Use and GHG Emissions**

Given the base case described in Section 2, estimate the typical energy use and GHG emissions associated with normal operation of the base case Technology System(s). Please provide the following:

* A supporting rationale for why the base case system described in this proposal is an appropriate basis for comparison relative to the proposed Project.
* The relevant specifications and operational parameters of all equipment/systems in the base case conditions. Assume operating conditions for a typical year and typical load(s) or output(s) expected annually.
* The estimated annual energy consumption (GJ) by energy source (e.g., natural gas, electricity, other) for the base case system.
* Using appropriate emissions factors (Guidelines Section 9), provide the estimated annual GHG emissions by energy source (e.g., natural gas, electricity, other) for the base case system.
* Estimate the typical product life for the base case Technology System(s) (in years).
* Provide a description of calculation approach, sample calculations and/or output from modelling software.
* Document any associated assumptions, equations, rationale, and/or references as applicable.

Note: the base case system assumed must be sized to deliver the same total useable output as the proposed Project.

Insert content here (text, figures, tables, etc.).

**Proposed Technology System(s) Energy Use and GHG Emissions**

Please provide a model or series of documented calculations completed to estimate energy savings and GHG emissions associated with the proposed project. In addition, provide:

* The relevant specifications and operational parameters of all equipment for the Technology system(s) in the Project. Assume operating conditions for a typical year and typical load(s) or output(s) expected in a year.
* The estimated annual energy consumption (GJ) by energy source (e.g., natural gas, electricity, other) for the proposed Technology System(s).
* Using appropriate emissions factors (Guidelines Section 9), provide the estimated annual GHG emissions (metric tonnes of CO2e) by energy source (e.g., natural gas, electricity, other) for the proposed Technology System(s).
* The expected operational project life for the proposed Technology System(s). This refers to the total time (in years) the system(s) will be installed at operational at all Facilities.
* A description of calculation approach, sample calculations and/or output from modelling software.
* Document any associated assumptions, equations, rationale, and/or references as applicable.

Insert content here (text, figures, tables, etc.).

**Energy Savings and GHG Emissions Reductions**

Calculate the energy savings and GHG emissions reductions by subtracting the total proposed project values from the total base case values. Please summarize the results by providing the information below.

Insert content here (text, figures, tables, etc.).

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Value** | **Unit** |
| Annual energy savings (natural gas) |  | GJ/year |
| Annual energy savings (electricity) |  | GJ/year |
| Annual energy savings (other energy sources) |  | GJ/year |
| **Total annual energy savings** |  | GJ/year |
| Annual GHG emissions reductions (natural gas) |  | tCO2e/year |
| Annual GHG emissions reductions (electricity) |  | tCO2e/year |
| Annual GHG emissions reductions (other sources, e.g. reduced venting, etc.) |  | tCO2e/year |
| **Total Annual GHG emissions reductions** |  | tCO2e/year |
| Project operational life  *As used in savings calculations* |  | years |
| Total lifetime GHG reductions  *Total annual GHG reductions multiplied by project operational life* |  | tCO2e |

1. Project Budget

**Eligible Project Costs:**

Describe the Eligible Expenses broken down by item or categories as applicable. Refer to what expenses are eligible in Section 4 of the Guidelines. Please consider:

* Preliminary design work (such as feasibility studies, design, and engineering), equipment costs, installation, permitting, commissioning, etc. For costs that have confirmed final values, note as “*Final”*.
* For costs that may vary because of design or analysis to be completed following approval, please provide the best estimated cost and indicate that values are “*Estimated”*.
* List Eligible Expenses and any applicable assumptions taken to determine cost using the table template provided. Additional context or supporting information can be included below the table.
* All major assets to be purchased must be itemized.

Note: For successful proposals, the funding offer includes a maximum funding limit based on total Eligible Expense costs listed in the table below. Final funding contributions issued by ERA are based on actual costs as supported by proof of payment documentation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item #** | **Item Description** | **Total Estimated Project Cost ($ CAD)** | **Estimated or Final** | **Assumptions** |
| 1 | *e.g. equipment item 1* | *$100* | *Final* | *Actual cost* |
| 2 | *e.g. engineering activity x* | *$100* | *Estimated* | *Based on quote, assumes X hours assumes no changes to final design…* |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  |  |
| 8 |  |  |  |  |
| 9 | Insert rows as needed |  |  |  |
| Total Project Value Estimate | | *e.g. $200* |  |  |

Insert additional content here (text, figures, tables, etc.).

**Additional Non-Eligible Costs:**

If applicable, describe any additional project costs not applicable under the definition of Eligible Expenses. This information will help inform ERA on total costs associated with the installation of the proposed Technology System(s). Describe the cost type, how it relates to the project, and the estimated or actual value.

Note: these costs will not be factored into the funding contribution maximum calculation.

Insert content here (text, figures, tables, etc.).

1. Funding Request & Supporting Narrative

**Funding request**

Please provide the total funding requested from ERA that is necessary to support the Project to successful completion. Refer to the Section 3 in the Guidelines for funding contribution maximum value.

|  |  |
| --- | --- |
| Total Project Value ($ CAD) | [insert value] |
| Total funding requested ($ CAD) | [insert value] |
| Funding request as a percent of total eligible cost (%) | [insert value] |

**Supporting Narrative**

Provide context and rationale for the funding request. The supporting narrative should, at a minimum, include the following:

* Supporting rationale for the level of funding requested.
* Any applicable internal business case targets necessary for the Project to proceed (e.g., minimum Internal Rate of Return or hurdle rates).
* All other sources of funding this Project has received including; private investment, debt financing, and any other public sector funding.

Insert content here (text, figures, tables, etc.).

1. Market Potential

**Technology Market Potential:**

Please describe the potential market demand for the proposed Technology System(s) in Alberta and which market sector(s) (e.g., commercial buildings, industrial, agriculture etc.) the demand falls under. This description can include:

* The number of facilities for which a similar project would be applicable.
* The facility, industry, sector, or other demographics of potentially applicable facilities.
* Typical Technology System(s) size ranges.
* Please note any major assumptions included as part of the analysis.
* If this Technology System(s) were to be installed at other facilities, would the base case and GHG reductions be similar in all applications?
* Specific examples of current or future projects using this Technology System(s).
* Economic or other benefits for similar projects in Alberta.

Insert content here (text, figures, tables, etc.).

1. Economic & Additional Benefits

Using the sections below, ERA will evaluate the proposed Technology System(s) in terms of the potential final return on investment value offered to users over the operational life of the Technology System(s).

**Return on Investment – Inputs and Assumptions:**

Describe and provide a high-level quantitative estimate for how this Project will have an impact on job creation and if the Technology System(s) were to have higher market uptake in the future, estimate the potential market impacts on job creation.

Please provide the requested input parameters for a return investment calculation for the proposed Project as per the methodology outlined in the ETP Guidelines. Include relevant considerations, assumptions, or notes in the column provided or below the table.

Refer to Section 10 in the Guidelines for further details.

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Value** | **Units** | **Assumptions & Notes** |
| Energy cost – electricity |  | *$/GJ* |  |
| Energy cost – natural gas |  | *$/GJ* |  |
| Energy cost – other source (list as applicable) |  | *$/GJ* |  |
| Total Project Cost |  | *$ CAD* |  |
| Project operational life |  | Years |  |
| Routine maintenance costs (annualized) |  | *$ CAD/ year* |  |
| Annual energy cost savings - electricity |  | *$ CAD/ year* |  |
| Annual energy cost savings – natural gas |  | *$ CAD/ year* |  |
| Annual energy cost savings – other source (list as applicable) |  | *$ CAD/ year* |  |
| Annual cost savings from avoided GHG emissions  (if applicable) |  | *$ CAD/ year* |  |
| Annual cost savings from any other factors |  | *$ CAD/ year* |  |
| Add any additional parameters required |  | *unit* |  |

**Return on Investment – Calculation:**

Calculate the estimated Return on Investment and provide the requested results in the table below.

* Simple return on investment over project life calculated using the following equation:

[(net annual cost savings \* project operational life) – Total Project Costs] / Total Project Costs

Refer to Section 10 in the Guidelines for further details.

Insert any additional content here (details and assumptions).

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Value** | **Units** | **Assumptions & Notes** |
| Total Project Cost |  | *$ CAD* |  |
| Net annual cost savings |  | *$ CAD/ year* |  |
| Simple payback period |  | *years* |  |
| Simple return on investment over project life |  | *%* |  |

**Additional Benefits:**

* Describe any additional benefits the Technology System(s) will provide, such as air quality, reducing water consumption, reductions of waste stream, other environmental benefits, safety benefits, community benefits, etc.
* If you are comfortable, please consider providing whether the project team includes anyone from an underrepresented group, or note whether you have a Diversity, Equity and Inclusion strategy that aims to support underrepresented groups. This information won’t be a part of the evaluation and will only be utilized for ERA awareness and information gathering to inform our call and program designs, engagement strategies and applications process based on the total population we see applying.

Refer to Section 11 in the Guidelines for further details.

Insert any additional content here (details and assumptions).

1. GHG Abatement Potential

Using the sections below, ERA will evaluate the proposed Technology System(s) in terms of the potential to deliver cost-effective emissions reductions to users over the operational life of the product.

**Project Greenhouse Gas Emissions Abatement Potential**

Using the analysis completed for Section 2, calculate, and provide the Project’s lifetime GHG Emissions abatement rate, considering the Total Eligible Project Costs calculated in Section 3. Please use the following equation:

Lifetime project GHG abatement rate = total ERA funding request / total lifetime GHG reductions

Insert any additional content here (details and assumptions).

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Value** | **Unit** |
| Total lifetime GHG reductions  *(restated from Section 2)* |  | tCO2e |
| Lifetime project GHG abatement rate  *(Total ERA funding request divided by total lifetime GHG reductions)* |  | $ CAD/ tCO2e |

1. Project Plan

ERA will be evaluating the FPP based on the confidence that the project can be completed successfully within the ETP timeline requirements. To support this evaluation, please provide a Project Plan that includes the following:

* Clearly indicate all key project steps and/or milestones for design, procurement of equipment, installation, permitting, testing, and/or other processes as applicable.
* Descriptions, summaries, activity breakdown of key project step activities, as necessary, based on complexity of the Project (i.e., complex activities should have greater detail included).
* Clearly indicate the timeline for key Project milestones, including demonstrating that the completion milestones align with ETP requirements.

Insert content here (text, figures, tables, etc.).

|  |  |  |
| --- | --- | --- |
| **Key Project Step** | **Timeline** | **Notes** |
| *e.g. equipment item 1* | *May 1, 2022 - May 31, 2022* | *Dependent on supply chain* |
|  |  |  |

1. Project Risks

ERA will be evaluating FPPs in the context of risks associated with any aspect of each project. Please identify all significant risks to the Project’s success and provide analysis on the level of risk or implications as well as mitigation strategies that will be deployed as part of the project to manage the risk. Please include the following as part of the risk assessment:

* Identify risks to project completion timelines, workplan activities, project costs or financial returns, Technology System(s) performance, operation and longevity, supply chain and any other aspects of the Project.
* An evaluation of the magnitude of impacts and/or probability of consequences, as applicable.
* Mitigation strategies to address, minimize, or avoid risks or the impacts.

Insert content here (text, figures, tables, etc.).

1. Project Team’s Qualifications

ERA will be evaluating the proposed Project team’s qualifications in terms of their ability to successfully and properly complete all activities listed in the Project Plan in a manner that meets all codes, requirements, and industry standards/best practices.

Please describe:

* The individual members included in the Project team, and/or contracted third party organizations that will be carrying out activities associated with the project including relevant training, expertise, experience, qualifications, or licenses as applicable.
* Where there are complex activities, please directly link activities with specific technical or other qualification requirements to specific individuals or organizations and highlight how those individuals or organizations have the appropriate experience, qualifications, etc.

Insert content here (text, figures, tables, etc.).

1. Declaration of Submission Accuracy

This section should be signed by primary contact within the Lead Applicant organization.

I, (insert name) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hereby declare that the information contained in this document is accurate and complete to the fullest extend possible.

I have read and understand the conditions and limitations outline in Appendix B: Project Partner Acknowledgement Form.

|  |  |
| --- | --- |
| INSERT ORGANIZATION NAME | |
| Per: |  |
| Insert Name, Role | |

Appendix A: Conditions and Limitations

Emissions Reduction Alberta is a registered tradename of the Climate Change and Emissions Management (CCEMC) Corporation and is referred to as ERA throughout this document. By submitting a FPP, you confirm that you have read, understand and accept the Conditions and Limitations for the Expanded Technologies Pilot (ETP) and, that each of you, the applicant (the “Proponent”), and any Project Partners (including contractors) agree as follows:

1. ERA may at any time suspend, terminate, cancel, withdraw, amend or alter all or any portion of ETP, including but not limited to Program requirements, the FPP selection and review process and overall eligibility criteria.
2. ERA reserves the unqualified right to accept or reject any or all FPPs for any reason in ERA’s sole discretion.
3. The final decision with respect to project approval and funding rests solely with ERA.
4. Proposals that do not comply with the requirements described in the ETP Guidelines document may be rejected in whole or in part or not considered by ERA. ERA reserves the unqualified right to accept or reject a non-compliant FPP.
5. Acceptance of an FPP does not create any binding contract between ERA and the applicant. ERA shall not be obligated in any matter whatsoever to any applicant until a written funding agreement (a “Contribution Agreement”) between ERA and the Lead Applicant Organization has been duly executed.
6. Neither ERA nor any of ERA’s affiliates will have any liability whatsoever to you, the applicant or any Project Partners, or any of them, in connection with this FPP or the Program generally.
7. You, the applicant and any Project Partners will not make a claim against ERA or any ERA affiliate for any reason whatsoever or howsoever relating to this FPP or the Program generally. You and any Project Partners are undertaking the expenditures required to prepare and submit an FPP entirely at your own risk, and you waive any right and release ERA and all ERA affiliates from any demands, liability, claim or recovery for costs, expenses, or damages incurred whatsoever or howsoever arising out of or relating to this FPP or the Program, whether such right or claim arises in contract, negligence or otherwise.
8. ERA takes no responsibility for the accuracy of the information supplied during the proposal process by ERA or any ERA affiliate.
9. The applicant has reviewed the Guidelines and Proposal Instructions and represents and warrants that all information contained in the FPP is complete, true and accurate.
10. The applicant confirms that it meets the eligibility requirements to be a Lead Applicant and that any facility involved in the Project meets the requirements to be an Eligible Facility.
11. The applicant confirms that the proposed Project meets the eligibility requirements to be an ETP Project.
12. The applicant has obtained or will have obtained all rights, permits, licenses and authorizations required to carry out the Project in the Eligible Facility.
13. If the applicant is not the owner of the Eligible Facility, then it has obtained the owner’s consent to carry out the Project within the Eligible Facility.

Appendix B: Partner Acknowledgement Form

This form is to be signed by the Lead Applicant and all Project Partners as a funding requirement under Emissions Reduction Alberta’s (ERA) Energy Savings for Business (ESB) Expanded Technologies Pilot (ETP). Please review the terms and conditions below to ensure you understand the roles and requirements applicable to the Lead Applicant and the Project Partner(s).

**Definitions**

**Lead Applicant:** designated as the primary point of contact for the project and will be the sole signatory for the funding agreement.

**Partner:** any partner to the Lead Applicant including technology developers, product and service providers

(includes but not limited to equipment installers, engineering firms, and commercial energy auditors), facility owners and operators, and others.

**Acknowledgments**

By signing this, the Project Partner acknowledges and agrees as follows:

1. ERA or its agents may contact the Project Partner at any time to administer ETP and request additional details/records at any time;
2. Upon reasonable notice, ERA or its agents may access any equipment or site owned or operated by the Project Partner for the ‎purposes of ETP verification;
3. ‎ The Lead Applicant is the primary point of contact with ERA and the sole counterparty to the Contribution Agreement and notwithstanding the foregoing, the Project Partner agrees to comply with all terms and conditions required of Project Partners contained in the ETP Guidelines or the Contribution Agreement, as applicable. Further, the Project Partner confirms that they have received a copy of the ETP Guidelines and the Contribution Agreement and understands their obligations thereunder;
4. Unless otherwise agreed to by ERA in writing, all Program funding will be delivered directly to the Lead Applicant as the sole counterparty to the Contribution Agreement and ERA is in no way liable to the Project Partner for any action taken under the Program; and
5. ERA may publicly publish Program-related information including but not limited to: the Project Partner’s name, the facility address involved in the Project, and Eligible Expense details, including the energy savings achieved as a result of the Project.‎

**Representations, Covenants and Warranties**

By signing this, the Project Partner represents, warrants and covenants as follows:

1. The authorized signatory has the authority to sign on behalf of and bind the Project Partner;
2. Any information shared with ERA is accurate, true and complete at the time it is given and at all material times thereafter; and
3. At all times it will comply with all Program Guidelines and Contribution Agreement terms to ensure the Lead Applicant’s standing under the Program.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LEAD APPLICANT:** Company name    Lead Applicant company address    Lead Applicant contact | |  | **PROJECT PARTNER:** Company name    Partner company address    Partner contact information | |
| Per:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_             Authorized Signatory | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ |  | Per:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_             Authorized Signatory | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |