Alberta Energy

Innovative Energy Technologies Program

(I E T P)

Application Package

Round Five

November 15, 2009

Alberta

Freedom To Create. Spirit To Achieve.

ENERGY

Energy Policy and Research
Research and Technology

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File No. ***IETP***

October 8, 2009

To Interested Parties:

RE: Innovative Energy Technologies Program (IETP)
Applications Being Accepted for Round 5

The Innovative Energy Technologies Program (IETP) is now open to accept applications under Round 5 of the Program. Deadline for applications is November 15, 2009.

The application package is available at the following web address:

http://www.energy.alberta.ca/Oil/768.asp

Some important items in relation to Round 5 are:

- There is **no pre-application option** as in Round 4.
- Projects involving **oil sands mining technologies**, including tailings management, **are now eligible** under the Program.
- Projects must be approved by March 31, 2010.
- To be eligible for a royalty adjustment, costs must be incurred by March 31, 2012.
- Applications for royalty adjustments must be submitted by March 31, 2013.

Further information is available on the Department of Energy IETP Web Site.

Any questions may be directed to:

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Research & Technology Branch
Alberta Department of Energy
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Sincerely,

{Original signed and on file}

Christopher J. Holly
Branch Head, Research & Technology

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Innovative Energy Technologies Program
Application Process

SUMMARY

The purpose of this application process is to allow Alberta Energy to review applications for project funding for the Innovative Energy Technologies Program (IETP) in a consistent, fair, and equitable manner. Applications received prior to the close of each application period will be evaluated and held for approval by Alberta Energy. This application process is in accordance with the *Innovative Energy Technologies Regulation* (AR 250/2004) under the *Mines and Minerals Act*.

Application submissions are contemplated for the IETP for the first four years of the program. After the fourth year the Minister will determine the need for further requests for applications. The deadline for the FIFTH round of applications is November 15, 2009. **No pre-applications will be considered**
The IETP has a maximum funding limit of $200 million over five years starting April 1, 2005. Of the total, $15 million has been committed for the CO_2 Projects Royalty Credit Program.

The royalty adjustment for any one project is limited to a maximum of $10 million. The actual level of funding for each approved project will be determined by Alberta Energy based on the merits of that project proposal as determined in the evaluation process and the availability of funds. However the maximum funding for an approved project is 30% of eligible project costs. Funding under this program may be reduced if the project is receiving other provincial or federal government support. Royalty adjustments may be limited if total direct support from the Government of Alberta exceeds 30% of eligible project costs or if total direct and indirect support from the Government of Alberta, including cost deductibility in royalty calculations, exceeds 50% of eligible project costs. Cumulative funding is capped at 50% when costs are shared with other governments. In this instance, the royalty adjustment may be reduced from 30% to ensure that total government funding does not exceed 50% of total eligible project costs.

Alberta Energy decisions are final and not subject to appeal to the Minister. However, a project proposal that is not approved may be revised and submitted for consideration in a subsequent period.

1. INTRODUCTION

As steward of the energy resource in the province, Alberta Energy is responsible for ensuring a fair return from the production of the resource. Alberta Energy understands that it sometimes should share the risk of development and demonstration of innovative technologies required to produce the resource. Alberta Energy believes that a producer's ability to undertake certain projects is often limited by the related technical and financial risk. Royalty adjustments under this program offset some of the financial risk to encourage producers to undertake the projects.

2. PROGRAM OBJECTIVE

The ultimate goal of the program is that technology developed in approved projects will result in increased royalties to the province. The most significant contributor to the anticipated increase in

royalties will be increased recovery factors resulting in economic incremental production. Additionally projects that develop technologies that will reduce overall development costs will be considered if it can be demonstrated that the lower cost will extend the economic life of the reservoir and consequently result in incremental production.

The specific program objectives include:

- increasing the recovery from oil and gas deposits resulting in incremental production and royalties;
- finding a flexible commercial technical solution to the gas over bitumen issue that will allow efficient and orderly production of both resources;
- improving the recovery of bitumen resources by in-situ and mining (including tailings management) technologies;
- improving recovery of natural gas from coal seams; and
- dissemination of technology and information developed through the projects supported by this program.

These objectives will be accomplished by encouraging innovation and faster commercialization of new technologies. The program would do this by sharing in the financial risk of certain projects through provision of royalty adjustments up to 30% of eligible project costs. Innovative pilot and demonstration projects in the energy sector in Alberta could be eligible for approval under the program. Demonstration of commercial technology will not be eligible for the program.

3. DESCRIPTION OF THE PROGRAM

This program is a temporary feature of Alberta's royalty system. It has the following attributes:

- A maximum of $185 million will be provided over five years in the form of oil, natural gas or oil sands royalty adjustments to offset up to 30% of eligible costs for projects approved under this program. Expenditures occurring prior to June 2, 2004 and after March 31, 2012 are not eligible under the program. Funding under the CO2 Royalty Credit Program ($15 million) has a separate application process.
- All projects must be located in Alberta. Any portion of a project outside the boundaries of Alberta will be ineligible under the program.
- Program administration for Round 5 is in two parts: (1) Application; and (3) Allocable Cost Claims (see section *9*: *Administration of Allocable Cost Claims*).
- Approval of applications will be constrained by total program funding, the time limit for the program, and project selection criteria (see sections *6.4: Evaluation Ranking Criteria* and *7: Application and Evaluation*).
- In co-operation with the Alberta Energy Research Institute (AERI), or its successor, an evaluation committee will review the applications and advise on the merits of the projects in the context of the project selection criteria (see section 6.2: *Evaluation Committee*). IETP projects addressing the gas over bitumen issue will also require the recommendation of the Gas Over Bitumen Technical Solution Executive Steering Committee, based on its priority rankings. Review and recommendation of the project by the Technical Solution Executive Steering Committee must be completed before an application is submitted.
- Alberta Energy will make the final decision on which innovative pilot and demonstration projects to approve and the level of support that will be provided.

- A maximum of $10 million in royalty adjustments may be approved for a single project. Approved projects must commence within six (6) months of the date of the approval.
- The royalty adjustments are not linked to production from the project site. Adjustments may be applied against a company's Alberta Crown oil, natural gas (methane) or oil sands royalty liabilities (see section *9.1).*
- Royalty adjustments will be considered for the Crown interest portion only of the approved project. Adjustments will be reduced proportionately to reflect any freehold interest in the approved project.
- Only the incremental project costs directly related to the approved project will be eligible under the program. Any costs not directly related to the project will be the sole responsibility of the project applicant or a third party. Only those costs specifically approved by the Minister will be eligible under the program.
- Adjustments are claimed monthly as costs are incurred. Failure to meet the terms and conditions of a project approval could result in the cancellation of the project approval and reversal of the royalty adjustments provided.

4. CONFIDENTIALITY AND INTELLECTUAL PROPERTY

Alberta Energy will exercise reasonable efforts to keep the disclosure of information confidential. However, as a government authority, Alberta Energy is subject to the provisions of the *Freedom of Information and Protection of Privacy Act* (FOIP Act). Alberta Energy is prohibited from disclosing certain information supplied explicitly or implicitly in confidence where disclosure could reasonably be expected to, among other things, harm significantly your competitive position or would be an unreasonable invasion of your personal privacy (FOIP Act, sections 16 and 17 respectively). If, in response to a request under the FOIP Act, Alberta Energy is considering disclosing a document that may contain information that affects your interests under section 16 or may be an unreasonable invasion of your privacy under section 17, Alberta Energy is required to notify you in advance and provide you with the opportunity to object or consent.

Nevertheless, knowledge transfer will be a condition of approval under the program and annual and final technical reports must be submitted to Alberta Energy and will eventually be made available to the public. You may claim confidentiality for such reports for a period of two years from the date the report is required by Alberta Energy. All approved applications will have to sign an Intellectual Property agreement.

Alberta Energy expects that technology supported with funding from this program will be widely available and applicable. To meet this objective, an intellectual property agreement with successful project applicants will be entered into prior to an approval being issued that will ensure the objectives of the program are met. The terms of this agreement will be standard, except to the extent necessary to address the specific circumstances of the proposed project.

5. APPROVALS

Successful applicants will be issued an approval after signing an intellectual property agreement.

6. EVALUATION PROCESS AND PROJECT SELECTION CRITERIA

6.1 Application Submission & Evaluation Process

The evaluation process for approvals is:

1. Project applications must be received by Alberta Energy by November 15, 2009 to be considered for the fifth round of applications.
2. An Evaluation Committee will review the applications in the context of the project selection criteria described below. There will be an initial (scope) screening followed by an in-depth review (in order: technical, geological, and economic). IETP projects addressing the gas over bitumen issue will also require the recommendation of the Gas Over Bitumen Technical Solution Executive Steering Committee prior to the application deadline.
3. The Evaluation Committee provides advice to Alberta Energy on the merits of the application. The recommendations of the Gas Over Bitumen Technical Solution Executive Steering Committee for IETP projects addressing this specific objective will be based on its priority rankings assigned to these applications.
4. The Minister will make a decision on projects to approve as well as the specific terms and conditions of approval.
5. The applicant is advised, in writing, of the decision.
6. Upon approval of an application, the applicant may request establishment of royalty adjustments (see section 9: Administration of Allocable Cost Claims).

During the evaluation process, the project applicant may be asked to provide additional information, to respond to questions about the project proposal, or to make themselves available for meetings.
The applicant may be asked to make a presentation to the Evaluation Committee (see section *6.2: Evaluation Committee)*. The presentation will be scheduled subsequent to the application submission, to allow sufficient time to review the application. The presentation is intended to provide clarification to questions that the Evaluation Committee might have.

The applicant may withdraw his/her application at any stage of the evaluation process.

6.2 Evaluation Committee

An Evaluation Committee will be composed of representatives from Alberta Energy and AERI (or its successor). The committee may request independent experts from outside the committee to provide them with additional advice.

6.3 Initial Screening Criteria

To be considered for approval, the project must pass the following initial criteria:

1. Be conducted in Alberta **and**
2. Involve the application of innovative technologies to improve the recovery of Crown conventional oil, natural gas (conventional and unconventional) or in situ oil sands. **or**,
3. Be recommended by the Gas Over Bitumen Technical Solution Executive Steering Committee prior to application submission.

6.4 Evaluation Ranking Criteria

The project applications will be evaluated using eight performance criteria (see section 7: Application and Evaluation), which highlight specific information for which the Evaluation Committee will consider (i.e. technical, geological, and economic). These criteria represent the review sequence, priorities and expectations of Alberta Energy. The language statements establish a performance level for each criterion. The language statements assist the Evaluation Committee in evaluating the merits of a proposal in comparison to other proposals being considered for approval.

The applicant provides information demonstrating how the proposal fits a particular criterion. The Evaluation Committee will assess the proposal against the same performance criteria and language statements. Assessment scores are then used to rank the application to see how well the proposal meets Alberta Energy priorities and expectations and how the proposal compares to other opportunities presented. Additionally, Alberta Energy will provide further consideration to projects expected to achieve reduced energy intensity (consumption) per unit of production over conventional technology, significant cost reductions over conventional technology applications, meaningful employment opportunities, reduced fresh water usage over conventional technology, and improved environmental performance in the areas of land disturbance, air quality, and mine tailings management. If these benefits are anticipated in the project seeking approval, applicants should highlight them in the project application.

Projects dealing with the gas over bitumen issue may not meet all the evaluation criteria however these projects may still be eligible if they receive the recommendation of the Gas Over Bitumen Technical Solution Executive Steering Committee. The prioritization of these projects by the Steering Committee will be considered in the ranking of these projects under the IETP.

7. PROJECT INFORMATION, APPLICATION & EVALUATION

This section contains the application form and criteria language statements (refer to Appendix I for the actual required documentation). The applicant is required to fill out the application form and attach additional supporting information as schedules to the application.

8. POST APPROVAL PROCESS

If, following the completion of the evaluation process, Alberta Energy approves the project under the terms of the program the applicant will receive a letter indicating that the application has been approved to proceed to the next stage, which is the execution of an intellectual property agreement and the finalization of the terms and conditions of approval, including eligible costs.

The applicant will have an opportunity to provide input on a draft of the project approval before it is issued.

9. ADMINISTRATION OF ALLOCABLE COST CLAIMS

9.1 Monthly and Quarterly Claims

Once a project is approved under this program, the operator of each approved project may submit (optional) monthly claim forms to receive the royalty adjustment. It is mandatory for the project operator to submit at least one claim per reporting quarter. If no eligible costs have been incurred, a zero quarterly report is required. Quarters for IETP Claim submissions end in March, June, September and December of each calendar year. The first reporting quarter for any approved IETP project shall be the quarter during which the project commences.

Royalty adjustments will be applied as per the operator's direction. Adjustments may be refunded from the operator's oil royalty account, or applied against an oil sands royalty project. For natural gas, adjustments will be applied against the methane royalty payable of individual royalty clients. The operator will be responsible to forward payment to other working interest owners in the project.

The claim form will have three parts:

1. Summary of eligible costs for the period.
2. Calculation of royalty adjustment for the month or quarter.
3. Specific direction on how to apply the royalty adjustment. (Identify Gas royalty clients, Oil batteries or Oil Sands project.).

The monthly claims are optional and due by the 30th of the month following the month in which the costs were incurred. Quarterly claims must be received by the end of the month following the end of the reporting quarter. Royalty adjustments will be limited to the lesser of the allocable costs, the equivalent value of royalties for that commodity payable in the month, or the maximum adjustment specified in the approval. For natural gas it is the methane royalty payable aggregated at the corporate level. Royalty adjustments in excess of the limit will be carried forward to future months.

9.2 Annual Claim

Operators of each approved project must submit annual claim forms by March 31, following the claim year. The claim year ends on December 31. The annual claim includes details of the cost categories as approved in the application. Upon receipt, Alberta Energy will complete a reconciliation of actual costs and the total monthly adjustments for the claim year. Alberta Energy will adjust the clients' royalty accounts for any differences.

All Innovative Energy Technologies Projects are subject to audit.

Detailed instructions and forms will be available from Alberta Energy before any monthly claims are due. For more information on the administration of this program please contact:

IETP Coordinator, Energy Policy & Research Division Geoffrey.Pearson@gov.ab.ca

Appendix I - Application and Evaluation

A-1.1 Project Overview

Please note that the applicants' name, organization, project title, abstract, overview, expected benefits and amount awarded will be public information.

1. Project Title: (**max. 10 words**)
2. Project Location: **(attach relevant maps)**
3. **Previous Production History and Alternate future plans for site in lieu of proposed initiative:** **(attach relevant information)**
4. Abstract: (**max. ½ page**)
5. Non-Confidential Overview: **(max 1 page)**
7. **Expected Benefits to Alberta:** (**max. ½ page**)
7. Key Words: (**prioritized, max. 15**)
8. Total Project Cost:
9. Amount Requested from IETP:

10. Fit with Innovative Energy Technologies Program Objectives (check boxes that apply):	
Innovative technology pilot demonstration that improves recovery from Alberta's conventional oil resources.	
Innovative technology pilot that demonstrates a flexible commercial technical solution to the gas over bitumen issue that will allow efficient and orderly production of both resources.	
Innovative technology pilot demonstration that improves recovery from Alberta's in situ bitumen resources.	
Innovative technology pilot demonstration that improves recovery from conventional and non-conventional natural gas resources, including natural gas from coal.	

11. Project Start Date: (year/month/day)	**12. Project Completion Date:** (year/month/day)

13. Has this application been submitted to other funding organizations?
(Y/N, if Y, please list their names and contact information)

In reference to Section 5 of the application package, Alberta Energy may contact the other funders listed. If you do not want Alberta Energy to contact these other organizations, please give your reasoning below:

14. Project Endorsement? (Y/N; if yes, please attach letters of support and endorsement)

15. Baseline Information

The personal information being collected is subject to the provisions of the Freedom of Information and Protection of Privacy Act.

a) Team Leader: (attach curriculum vitae)	
Title:	
Organization:	
Address:	
Postal Code:	**E-mail:**
Phone:	**Fax:**

b) Key Team Members (attach curriculum vitae for each member) *Additional rows may be added if necessary.*

Name	**Institution**	**E-mail**	**Expertise Added**
1.			
2.			
3.			

16. Milestones & Deliverables (max. 2 pages)

a) Key Milestones: (Point form, concise; please indicate date when each milestone would be achieved)
b) Deliverables: (Point form, concise; please indicate what the project output would be)
c) Is this a continuation of an ongoing project? (Y/N, if Y, please explain)
d) Please indicate all past and present research or development work completed or in progress that relates to this proposal: (Point form; include names, companies and dates)

17. Applicant's Signature

The undersigned hereby:

a. verifies the accuracy of this application package;
b. consents, and has obtained the written consent of any individuals identified in the application, to the use of the information in the application by the Government of Alberta, employees of the Government of Alberta, and individuals and organizations under contract to provide services to the Alberta Department of Energy, for the purpose of evaluating this application and for any other purpose related to the Innovative Energy Technologies Program; and
c. consents to the applicant's name, organization, project title, abstract, overview, expected benefits and amount awarded being publicly disclosed if the application is approved.

Applicant's Name	**Title/Organization**
Authorized Signature	**Date**

A-1.2 Confidentiality

Any confidential or proprietary information contained in the project application should be specifically identified. Information provided will be subject to the access and privacy provisions of the *Freedom of Information and Protection of Privacy Act* (FOIP).

A-1.3 Evaluation Criteria

The Innovation	The Connectors	Benefits / Impact
Innovation		
Competitive Analysis	**Project Partners**	**Economic Benefits**
Project Management	**Commercialization/Expansion/ Replication**	**Environmental Impact**
Project Description and Plan		

The proponent is asked to assess the proposed project against these performance criteria using the language statements provided and to justify why a particular performance level was chosen. The Evaluation Committee will assess the proposal against the same performance criteria and language statements to see how well the proposal meets IETP criterion, priorities and expectations and how the proposal compares to other opportunities submitted to the IETP.

A-2 Project Evaluation Performance Criteria/Weightings

Innovation		
Innovation	15	
Competitive Analysis	5	
Project Management	5	
Project Description and Plan	10	
Sub-total		35
Connectors		
Project Partners	5	
Commercialization/Expansion/Replication	10	
Sub-total		15
Benefits/Impact		
Economic Benefits	40	
Environmental Impact	10	
Sub-total		50
Total		100

A-3 Instructions

- Complete Section 7.4 – Short Description of the Proposed Project.
- On each page in Section 7.5, review the A to D language statements for each performance criteria. Level D represents the minimum and level A the maximum level attainable. Starting with level D, determine if your proposal meets all the aspects of that level. If it does then review level C, and so on until you reach a level where not all the aspects of that statement can be met. The level that applies to your proposal is then the highest level where all aspects of the corresponding language statement are met. For example, if all aspects of a B statement have not been met, then select the C statement. Please record your assessment in the small box below the A to D statements and then justify why you chose that performance level in the larger text box. A rating of D in any criteria may mean that the application will be rejected, and an A rating in any criteria does not mean automatic acceptance. After you have completed your assessment describe why you have selected that assessment rating and include relevant proposal information that addresses that criterion.
- Assess all performance criteria independently of the others.
- If a single criterion is not applicable to your application, please assess yourself with an N and justify in the text box below the language statements why you think that the performance criteria is not applicable to your application.
- Please attach supplemental information as required at the end of the application.

An original signed application must be delivered by hand, courier or mail by November 15, 2009 to be eligible for consideration and evaluation. All packaged information should be marked "CONFIDENTIAL".

In submitting an application, please note the following:

a. Applications received unsigned, by facsimile, by electronic mail, or after the application deadline, will be rejected.
b. Ambiguous, unclear or unreadable applications may also be rejected.
c. Applicants must submit one (1) bound original signed application, one (1) paper copy of the application, and one (1) electronic copy of the application (including supplemental information) on compact disc (CD) clearly marked and addressed to:

Branch Head, Research & Technology Branch
Innovative Energy Technology Program
Alberta Energy
9th Floor, North Petroleum Plaza
9945 – 108 Street
Edmonton, Alberta
T5K 2G6

A-4 Short Description of Proposed Project

(Information supplied on this page may be used in public summaries and abstracts of IETP sponsored activities. Do not provide confidential information.)

Title *(Maximum ten words)*

Abstract *(Maximum 40 words)*

Summary

Please prepare a <u>concise</u> summary of the proposed project, including:

- The innovation (i.e. the discovery, invention, new knowledge, etc.) on which the project is based
- The problem it seeks to solve
- The project's objectives and deliverables
- The current state of development
- The advantages that will be valued by the user
- The expected commercial applications
- The capacity of the commercializing organization to successfully commercialize the concept

Please confine your response to this text box. You may give details on the proposed project in part B2

A-5 Detailed Project Proposal

Do not exceed 20 pages for this section of the Proposal (Information contained in the Detailed Project Proposal will not be used in public summaries or abstracts. It will be used solely to evaluate the application.)

Do not exceed two pages per criteria.

1 - The Innovation

This section provides the rationale for seeking financial support under the IETP. It addresses an identified technology gap and demonstrates an understanding of the context and scope of the technical problem. Based upon the results of previous research, the proposal fully describes the innovative solution to the problem that will advance the state of the art and identifies the scientific and technological challenges and opportunities. The proposal discusses the nature of the advance (from incremental technological advance, which solves the specific problem - through major scientific breakthrough, which not only solves the identified problem but opens new opportunities).

The Innovation:

D. … is not novel, represents a fine-tuning of existing technology, or is conceptual in nature.

C. … is adequately identified in the proposal and substantiated by information on technological challenges and opportunities, the technology is novel but incremental to existing technology.

B. … is fully identified in the proposal with full disclosure of the technical challenges and opportunities of the proposed technology/process which is novel and innovative, and which addresses an identified technology gap.

A. … **and**[1] the technology as being of "breakthrough" status.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the proposed project and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1] The "and" ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts.

2 - Competitive Analysis

This section describes similar work being done in Alberta and elsewhere, identifying the uniqueness and advantages of the proposed solution and potential synergies between research organizations. A detailed analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) is prepared, and the applicant demonstrates that he has identified and contacted potential collaborators, end-users and competitors.

The Project Description and Plan:

D. … provides only a cursory competitive analysis.
C. … includes a review of the uniqueness of the problem and other research and technologies in this area.
B. … clearly identifies the uniqueness of the problem to be solved, similar research and technologies in this area, potential synergies with other organizations and the potential strengths and opportunities in the proposal.
A. …**and**[1] has completed a detailed SWOT analysis, identified and contacted potential collaborators and competitors.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1] The "and" ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts

3 – Project Management

This section outlines the leadership, technical capabilities, experience and expertise that the team possesses to manage the project. The project is led by an experienced project manager, with a proven track record and is championed by senior management. This section demonstrates that the project team has available to it the combination of staff, work environment, tools, expertise, facilities and financial stability that will allow it to successfully complete the proposed work.
The curriculum vitae (CV) of the project leader and key team members should be attached as Schedule "A".

The Project Plan and Description:

D. does not include a project management structure and there is limited project management experience in the project team.
C. includes a project manager and a project management structure is in place.
B. includes an experienced project manager, with assigned management roles and requirements for regular reporting.
A. includes a project management structure and has a committed project manager with a successful track record of projects of similar size and scope; a steering committee is in place, there are plans for regular reporting and the financial stability of the applicant has been demonstrated.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the project team's leadership, capacity and capability and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

4 – Project Description and Plan

This section is the most important section of your proposal. It includes a "Statement of Work" and task-wise details of the process to be followed in carrying out the work. The approach and methodology in order ***to achieve the project's objectives, milestones, and deliverables*** *is described in this section. A Work Breakdown Structure describing the project's tasks, costs, along with a project timelines chart is included, as is a technical risk assessment and mitigation plan. The applicant must specifically identify under what circumstances the project would not proceed e.g. if the oil/gas price goes below $X per unit of production.*

For the full cost/budget detail and project schedule, please provide it as Schedule "B"*.*

Project Reports and Presentations *(periodic, project completion)****:*** *Applicant to specify information to be included and frequency of interim reports. The reports should show work-in-progress, operational data, analysis of technical performance, and project expenditures. Interim project presentations must be given annually. The applicant must submit a final report within three months of project completion and give a final project presentation.*

Included Information *(to be attached to the application form)****:*** *Reservoir characterization and assessment, production history, net present values (burdened and unburdened), existing production scenarios, incremental production forecasts, and field life extensions.*

An up-to-date price forecast (please identify) shall be used in the applicant's assessment. All relevant economic and technical assumptions used must be clearly stated.

Project Cost/Budget Categorization ***(additional categories may be used when applicable):***

1. *Capital costs (itemized for equipment > $10,000).*
2. *Consumed Energy.*
3. *Field labour costs for operators (direct salary and benefits at actual cost for staff assigned directly to the project on a full time or part time basis).*
4. *Other operating costs.*

The nature of various expenditures should be explained.
Total costs shown here must equal total project cost (item 8) under the Project Overview (section 7.1.1)

Project Funding: *The applicant should indicate in tabular format, if the project operator has applied for other funding, from whom (e.g. Alberta government, Federal government, etc.), how much funding has been requested, and whether that funding has been granted.*

The Project Description and plan:

D. is incomplete and contains minimal detail with only an outline of the proposed work.
C. is complete and contains a budget and schedule of work appropriate to the scope and objectives of the proposed project.
B. is complete, including all requested information with milestones and corresponding detailed budget breakdowns.
A. **and**[1] is cost effective with clearly defined stage gating (risk mitigation) provisions.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the proposed project work plan, budget and deliverables and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1] The "and" ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts

5 - Project Partners

The IETP encourages projects that have several participants and/or the sharing of expertise and facilities. It encourages letters from relevant stakeholders and/or partners who see great commercial potential in the proposed project.

The Proposed Innovative Energy Technologies Project:

D. will be carried out by the applicant and there are no letters from relevant stakeholders, including service/supply companies.

C. will be carried out by the applicant and is supported by letters from relevant stakeholders, including service/supply companies.

B. includes commitments, in writing, from two or more partners who support the project and in addition there are letters from relevant stakeholders, including service/supply companies.

A. **and**[1] the partners include an industry consortium.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the project partners and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1]The "and" ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts

6 – Commercialization/Expansion/Replication Plan

There is a description of the understanding of scope and scale of the project's ability to be expanded and/or replicated in other areas. The specific business receptors or commercial application for the technology resulting from this proposal is identified and formally built into the proposal. A description of the exploitation or commercialization and licensing strategy, designed to maximize the outputs of the project, is required. This section will demonstrate the applicants understanding of the scope and scale of the potential for commercialization, expansion and replication as well as the potential for a significant long-term return on investment and identify the commercialization risk.

Commercialization, expansion and replication:

D. has not yet been identified and the technology developed will not be available for use by other companies.

C. has been identified and a preliminary plan has been prepared.

B. has clearly demonstrated that the project will move the technology along the commercialization path, the partners have the business acumen and resources to commercialize the technology and there are other potential end users for the technology.

A. **and**[1] the applicant has prepared a detailed commercialization plan that is formally supported by partners and other end users.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the commercialization potential for the proposed project and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1] The "and" ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts.

7 –Economic Benefits

Projects submitted under this program are primarily expected to provide quantifiable economic benefits to Alberta through an expected increase in recovery from oil and gas deposits resulting in incremental production and royalties to the Alberta Crown. The economic forms required to be completed and submitted with the application can be found at the following link: http://www.energy.alberta.ca/Oil/pdfs/IETP_Economic_assumptions.pdf. *Successful projects are expected to have broad applicability throughout Alberta. As a secondary consideration, projects are also expected to provide quantifiable economic benefits to Alberta in areas such as employment, taxes, sales, new commercial opportunities, new investment and exports. Additional benefits may also accrue from reduced energy consumption and costs over conventional technology applications. Please provide a quantitative evaluation of the expected benefits from the project. Provide a spreadsheet (stating all assumptions).*

Note: A minimum score of C is required in order for an application to be considered for program approval. In addition, the economic benefits will not be assessed or rated if the Evaluation Committee determines that the application has insufficient technical merit.

The economic benefits:

D. are expected to be limited only to the firms involved in this project, the expected increase in recovery resulting from the commercialization of this innovation is likely to be limited, expected royalties are limited relative to the funding requested, and / or little supporting evidence is provided.

C. are expected to materially increase resource recovery from a pool, reservoir, deposit or coal seam resulting from the commercialization of this innovation, and expected incremental royalties are significant relative to the funding requested. Credible supporting evidence is provided.

B. are expected to be of high long term value to the Province, are well supported with evidence; the increase in resource recovery resulting from the commercialization of this innovation is expected to be large, and expected royalties are large relative to the funding requested.

A. **and**[1] the expected increase in resource recovery from the commercialization of this innovation is significant relative to the existing resource base in Alberta.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the economic benefits that should arise from the proposed project and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***

[1] .The “and” ties this criteria with the one above it i.e. it is the combined criteria rather than one individual criteria that counts.

8 - Environmental Impact

The Alberta energy industry is very proud of and would like to maintain its excellent environmental record. Please provide quantitative estimates of land, water and air pollutant emissions (stating all assumptions) and discuss the impacts your proposed project will have on the quality of air, water and land in Alberta. If applicable, assess the environmental impact in terms of pollution prevention/control with respect to these categories: Air Quality; Water Use (including recycling); and Land Management. For each category determine the potential impact in terms of decreasing or increasing pollution, relative to the existing technology that is currently being used (baseline).

Note: A minimum score of C is required in order for an application to be considered for program approval.

The project description and plan demonstrates that:

D. compared to existing technologies, the environmental impact will increase in any category.
C. compared to existing technologies, the environmental impact will not increase in any category.
B. compared to existing technologies, the environmental impact will decrease in one or more categories.
A. compared to existing technologies, the environmental impact will lead to a significant (> 40%) decrease in one or more categories.

☐ ***Record the A, B, C, or D letter that you selected in the small box to the left, then describe the environmental impact of the proposed project and add comments to justify why you have selected this statement below the line. Do not exceed two pages.***