Natural Resources Canada | Ressources naturelles Canada

CanmetENERGY

Leadership in ecoInnovation

Technical Guide to Canadian Renewable and Conservation Expenses (CRCE)



2012 Edition

Canada

Aussi disponible en français sous le titre :
Guide technique relatif aux frais liés aux énergies renouvelables et à l'économie d'énergie au Canada (FEREEC), édition 2012

DISCLAIMER

This Guide applies conclusively with respect to engineering and scientific matters only. In this Guide, only the information contained in Section 3.0 refers to engineering and scientific matters. Any information in this Guide that relates to income tax issues is provided for information purposes only. Since the Canada Revenue Agency is responsible for the interpretation and administration of the Income Tax Act and the Income Tax Regulations, anyone wishing further information concerning the income tax matters described in this Guide should contact the Canada Revenue Agency as described in Section 1.3.

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1.0 OVERVIEW

Natural Resources Canada (NRCan) is responsible for advising the Department of Finance Canada, the Canada Revenue Agency (CRA) and taxpayers on engineering and scientific issues relating to:

- the accelerated capital cost allowance (CCA) for specified clean energy generation and energy conservation equipment that meet the requirements of Class 43.1 or 43.2 of Schedule II to the *Income Tax Regulations* (the Regulations);

and

- certain clean energy generation and energy conservation project development activities, the cost of which qualifies as ***Canadian renewable and conservation expense*** (CRCE) under section 1219 of the Regulations.

Within NRCan, the responsibility for providing engineering and scientific advice for these tax incentives rests with the Class 43.1 and 43.2 Secretariat of the Industrial Innovation Group (IIG) in the Innovation and Energy Technology Sector (IETS). The Class 43.1 and 43.2 Secretariat, which is part of the Ottawa Research Centre of CanmetENERGY, draws upon the expertise of the engineering and scientific professionals at CanmetENERGY to provide expert advice in many different energy technology areas.

As stated in the definition of CRCE in subsection 66.1(6) of the *Income Tax Act*, the *Technical Guide to Canadian Renewable and Conservation Expenses (CRCE)* published by NRCan (the Guide) applies with respect to engineering and scientific matters associated with the determination of whether an outlay or expense meets the criteria of CRCE as defined in subsection 1219(1) of the Regulations.

NRCan has prepared this document in co-operation with the CRA and the Department of Finance. We welcome your comments.

1.1 ABOUT THIS GUIDE

This edition of the Guide:

- provides a general overview of CRCE;
- describes the types of expenses that are eligible and ineligible as CRCE;
- describes the criteria that must be met in order for a proposed wind energy conversion system to qualify as a ***test wind turbine*** under the Regulations;
- provides the application forms to be completed by taxpayers to allow the CRA, in consultation with NRCan, to determine whether a proposed wind energy conversion system qualifies as a test wind turbine;

and

- provides a table listing project development activities with respect to qualifying Class 43.1 or 43.2 clean energy generation or energy conservation projects, the costs of which typically qualify as CRCE.

This edition of the Guide has been published to reflect changes to the *Income Tax Act* and the Regulations with respect to CRCE, Class 43.1 and 43.2 that were enacted as of December, 15, 2011. Unlike the 1998 edition, which was published as part of the 1998 edition of the *Class 43.1 Technical Guide and Technical Guide to Canadian Renewable and Conservation Expenses (CRCE)*, this edition of the Guide has been published as a stand-alone guide. Taxpayers are advised to consult the latest edition of the *Technical Guide to Class 43.1 and 43.2* for further information on the types of projects that may have expenses that qualify as CRCE.

Taxpayers who wish to claim CRCE may use the information contained in this Guide in conjunction with the requirements of the Regulations to determine the eligibility of an outlay or expense.

This Guide may be amended from time to time to reflect amendments to the *Income Tax Act* and the Regulations with respect to CRCE. Taxpayers should consult the latest versions of the *Income Tax Act* and the Regulations whenever they are considering a project, to ensure that decisions are based on the legislation in force at the time. Proposed changes to Class 43.1 and 43.2 and CRCE are usually announced in the annual budget documents. For information on the most recent changes to the *Income Tax Act* and the Regulations, taxpayers are encouraged to visit the Department of Finance Web site at www.fin.gc.ca.

1.2 TERMS USED IN THIS GUIDE

Throughout this Guide, terms that are defined in the *Income Tax Act* and the Regulations are italicized in bold the first time they appear and excerpts from the Regulations are shown in italics. Class 43.1 or Class 43.2 of Schedule II to the Regulations is referred to as Class 43.1 or 43.2.

1.3 SERVICES PROVIDED BY THE DEPARTMENT OF FINANCE, THE CLASS 43.1 AND 43.2 SECRETARIAT, AND THE CRA

DEPARTMENT OF FINANCE

The legislated conditions for eligibility for Class 43.1 and 43.2 and CRCE are set out in provisions of the Regulations. Those provisions are adopted by the Governor-in-Council on the recommendation of the Minister of Finance after having been approved by the Treasury Board. The Department of Finance is responsible for developing tax policy, providing advice to the Minister of Finance, and the drafting of tax legislation and regulations. Tax policy concerns that may necessitate amendments to the legislation can be addressed to:

Director, Business Income Tax Division
Department of Finance Canada
East Tower, 17th Floor
140 O'Connor Street
Ottawa ON K1A 0G5

E-mail: ConsultationsACCA-DPAA@fin.gc.ca

CLASS 43.1 AND 43.2 SECRETARIAT

The Class 43.1 and 43.2 Secretariat is staffed with knowledgeable engineering professionals who are responsible for advising the Department of Finance, the CRA and taxpayers on engineering and scientific issues relating to investments in clean energy generation and energy conservation projects. Taxpayers or their authorized representatives may contact the Class 43.1 and 43.2 Secretariat to discuss the engineering and scientific aspects of a project at:

Class 43.1 and 43.2 Secretariat
Industrial Innovation Group
CanmetENERGY, Natural Resources Canada
Building 3, Room 204
1 Haanel Drive
Ottawa ON K1A 1M1

Tel.: 613-996-0890
Fax: 613-995-7868

E-mail: Class43_1@NRCan-RNCan.gc.ca

In response to written applications for technical opinion, the Class 43.1 and 43.2 Secretariat may provide written technical opinions – based on information provided by applicants – as to whether equipment in a proposed or completed project appears to meet the engineering and scientific requirements of one or more of the qualifying systems or categories of equipment described in Class 43.1 or 43.2.

While such opinions are not binding on the CRA, they do provide technical guidance to taxpayers and the CRA as to whether:

- equipment in a project meets the engineering and scientific requirements of one or more of the qualifying systems or categories of equipment described in Class 43.1 or 43.2;

and

- a proposed wind energy conversion system qualifies as a test wind turbine, pursuant to the requirements of subsection 1219(3) of the Regulations.

Further information regarding the eligibility of a system or equipment for inclusion in Class 43.1 or 43.2, including the application forms to request a technical opinion, may be found in the *Technical Guide to Class 43.1 and 43.2,* which is available from the Class 43.1 and 43.2 Secretariat.

CANADA REVENUE AGENCY

The Income Tax Rulings Directorate (the Directorate) is part of the Legislative Policy and Regulatory Affairs Branch of the CRA and is the centre of income tax expertise within the CRA.

The Directorate's role is to interpret the *Income Tax Act* and the Regulations and publish advance income tax rulings, technical opinions, interpretation bulletins and newsletters. In this context, the Directorate provides:

- advance income tax rulings relating to the tax consequences of proposed transactions to taxpayers for a cost recovery fee;
- technical opinions (free of charge) of income tax law to taxpayers, either directly or by assisting other areas of the CRA that deal with taxpayers;

and

- technical publications and newsletters that clarify the CRA's interpretation of income tax law.

Taxpayers wishing to obtain a binding advance income tax ruling (for which a fee is charged) as to whether certain property to be acquired will be eligible for inclusion in Class 43.1 or 43.2, as well as whether certain expenses will qualify as CRCE, should refer to the current version of Information Circular IC 70-6, *Advance Income Tax Rulings* issued by the CRA for the procedure to request an advance income tax ruling. The Circular is available on the CRA Web site at www.cra-arc.gc.ca.

Depending on the nature of the advance income tax ruling request, taxpayers may be required to complete the applicable forms and schedules located in Appendix I of this Guide or in the *Technical Guide to Class 43.1 and 43.2.* For more information concerning this procedure or general information regarding CRCE or Class 43.1 and 43.2, taxpayers may contact the Directorate at:

Resources Section
Income Tax Rulings Directorate
Legislative Policy and Regulatory Affairs Branch
Canada Revenue Agency
Place de Ville, Tower A, 16th Floor
320 Queen Street
Ottawa ON K1A 0L5

Tel.: 613-957-8953
Fax: 613-957-2088

E-Mail: itrulingsdirectorate@cra-arc.gc.ca

The Compliance Programs Branch of the CRA, in conjunction with the Tax Services Offices' audit programs, is responsible for ensuring compliance with the provisions of the *Income Tax Act* and the Regulations. For further information relating to the income tax consequences of completed transactions, contact your local tax services office.

2.0 INTRODUCTION AND SUMMARY OF CRCE

2.1 BACKGROUND

In Budget 1996, tabled March 6, 1996, the Government of Canada introduced a category of expenses known as Canadian renewable and conservation expense (CRCE) in respect of certain start-up expenses associated with the development of projects for which it is reasonable to expect that at least 50 percent of the capital cost of the depreciable property to be used in the project would be the capital cost of any property that is included in Class 43.1 or 43.2.

CRCE is designed to encourage investments in clean energy generation and energy conservation projects by providing income tax incentives for certain start-up expenses associated with these projects. Investments in clean energy generation and energy conservation projects can contribute to a reduction in greenhouse gas and air pollutant emissions and a more diversified energy supply.

2.2 DEDUCTION FOR CRCE

In general, expenditures that qualify as CRCE are considered to be ***Canadian exploration expense*** under the *Income Tax Act* and may be fully deducted in the year incurred or carried forward indefinitely and deducted in future years. Where CRCE is incurred by a ***principal-business corporation***, CRCE can be renounced to shareholders who invest in flow-through shares of the corporation. Before a principal-business corporation can renounce expenses that are eligible as CRCE to a shareholder, the shareholder and the corporation must enter into a flow-through share agreement. Only CRCE incurred on or after the date of the flow-through share agreement may be renounced.

For the purposes of the flow-through share provisions, a principal-business corporation is defined in subsection 66(15) of the *Income Tax Act* and includes corporations whose principal business operations involve certain activities relating to the exploration, processing or marketing of petroleum, natural gas or minerals. In addition, a principal-business corporation includes a corporation whose principal business is:

- the generation or distribution of energy or the production of fuel, using property described in Class 43.1 or 43.2;

and/or

- the development of projects for which it is reasonable to expect that at least 50 percent of the capital cost of the depreciable property to be used in each project would be the capital cost of property that is described in Class 43.1 or 43.2.

Flow-through shares are particularly beneficial to start-up corporations that do not have enough taxable income to benefit from tax deductions themselves. For further information on flow-through shares, refer to the CRA Web site at www.cra-arc.gc.ca/tx/bsnss/tpcs/fts-paa/menu-eng.html.

2.3 CRCE

CRCE is described in section 1219 of Part XII of the Regulations. It generally means an expense incurred by a taxpayer in respect of the development of a project, for which it is reasonable to expect that at least 50 percent of the capital cost of the depreciable property would qualify for inclusion in Class 43.1 or 43.2, provided that the amount is:

- payable to a person or partnership with whom the taxpayer is dealing at arm's length;

and

- not specifically excluded from CRCE under subsection 1219(2) of the Regulations (see Section 2.5 of this Guide).

The determination of what constitutes a project is generally a question of fact. For example, a planned undertaking relating to the development of a wind energy farm using equipment that is described in subparagraph (d)(v) of Class 43.1 would be considered a project. Further, a planned undertaking to set up a system to utilize landfill gas to generate electricity using equipment that meets the criteria described in paragraphs (a) to (c) of Class 43.1 would be considered a project.

It should be noted that CRCE and properties described in Class 43.1 and 43.2 normally involve established technologies for clean energy generation or energy conservation. Expenditures incurred on or in respect of activities that involve the development of new clean energy generation or energy conservation technologies or advancements to such technologies may be classified as ***scientific research and experimental development*** (SR&ED) expenditures. The term scientific research and experimental development is defined in subsection 248(1) of the *Income Tax Act*. As discussed further in Section 2.5 of this Guide, SR&ED expenditures are ineligible as CRCE, but may be eligible for a tax credit or for an immediate deduction in computing income (including the deduction of capital expenditures relating to certain depreciable property).[1]

Further information on Class 43.1 or 43.2 property may be found in the *Technical Guide to Class 43.1 and 43.2* published by NRCan.

2.4 EXPENSES ELIGIBLE AS CRCE

In general, expenses that are eligible for inclusion as CRCE are start-up expenses incurred during the initial phases of development of a qualifying project. For example, CRCE may include the costs of certain pre-feasibility studies, feasibility studies, environmental assessment expenses and expenses for negotiating power purchase agreements.

In addition, CRCE includes the specific expenses that are set out in paragraphs 1219(1)(a) to (g) of the Regulations. Paragraphs 1219(1)(a) to (g) include expenses incurred:

(a) for the purpose of making a service connection to the project for the transmission of electricity to a purchaser of the electricity, to the extent that the expense so incurred was not incurred to acquire property of the taxpayer;

This paragraph includes the expenses the taxpayer is required to incur in order to permit interconnection with an electrical transmission system, provided that the taxpayer does not own any of the property necessary to make the connection.

[1] Information regarding the scientific research and experimental development tax incentive program can be found on the CRA Web site at www.cra-arc.gc.ca/txcrdt/sred-rsde/menu-eng.html.

(b) for the construction of a temporary access road to the project site;

This paragraph includes the cost of constructing temporary roads necessary to support construction equipment to be used on the site and to transport equipment that will be used in the project from the nearest public road to the point of installation on the site. It does not include the cost of a road that will continue to be used once the construction is completed.

(c) for a right of access to the project site before the earliest time at which a property described in Class 43.1 or 43.2 in Schedule II is used in the project for the purpose of earning income;

This paragraph includes the costs of negotiating a site access agreement with landowners, obtaining approval to use the site from various regulatory authorities and obtaining permits (e.g. environmental, building and drilling permits) for the project from various regulatory authorities.

(d) for clearing land to the extent necessary to complete the project;

This paragraph includes the costs for the removal of trees, shrubbery, stumps and boulders.

(e) for process engineering for the project, including

(i) collection and analysis of site data,

This subparagraph includes the expenses for the collection and analysis of data to determine the extent and location of an energy resource at a site as well as the collection and analysis of site data (e.g. soil/bedrock bearing capacity, meteorological extremes) needed to evaluate the feasibility of project construction and equipment operation at the site. This subparagraph may also include the cost of tangible property (e.g. instruments and data-logging equipment) to be used in the project that cannot be removed and reused for other purposes. Any residual value of such property would be limited to its scrap value.

(ii) calculation of energy, mass, water, or air balances,

This subparagraph includes the expenses for determining the capacity, optimum design and specifications of major pieces of equipment.

(iii) simulation and analysis of the performance and cost of process design options,

This subparagraph includes the expenses for pre-feasibility and feasibility studies that may involve numerical simulation and engineering analysis of process design options but does not include the cost of physical simulation and analysis associated with pilot plants and related equipment.

and

(iv) selection of the optimum process design;

This subparagraph includes the expenses for the initial design of the overall plant systems and the development of single-line drawings for the optimum process design.

(f) for the drilling or completion of a well for the project, other than a well that is, or can reasonably be expected to be, used for the installation of underground piping that is included in paragraph (d) of Class 43.1 or paragraph (b) of Class 43.2 in Schedule II;

This paragraph includes the cost of drilling and completing wells for temporary, non-production purposes such as exploration and testing. It can apply to landfill gas, ground-source heat pump and geothermal electricity projects and may include casing and piping costs. It excludes the cost of drilling a well that is or can reasonably be expected to be used for the installation of underground piping that is included in Class 43.1 or 43.2, such as piping used for production purposes.

or

(g) for a test wind turbine that is part of a wind farm project of the taxpayer.

A test wind turbine is described in further detail in Section 3.0 of this Guide. Generally, a test wind turbine is a wind energy conversion system installed at the site of a planned wind farm project for the purpose of testing the level of electrical energy production from wind at the place of installation prior to the construction of the wind farm project. It should be noted that subsection 1219(4) of the Regulations provides that only the costs incurred for the acquisition and installation of a test wind turbine that is described in paragraph 1219(1)(g) will qualify as CRCE.

The table in Appendix II of this Guide provides a list of typical project development activities in respect of projects involving Class 43.1 and 43.2 property.

2.5 EXPENSES NOT ELIGIBLE AS CRCE

Expenditures incurred for the acquisition, installation or construction of equipment will generally form part of the capital cost of depreciable property and will not qualify as CRCE.

In addition, expenses set out in paragraphs 1219(2)(a) and (b) of the Regulations are not eligible for deduction as CRCE. Paragraphs 1219(2)(a) and (b) include any expense that:

(a) is described in paragraphs 20(1)(c), (d), (e) or (e.1) of the Act;

This paragraph refers to interest expense and certain financing expenses (described in paragraphs 20(1)(c), (d), (e) or (e.1) of the *Income Tax Act*) incurred for the project,

or

(b) is incurred by a taxpayer directly or indirectly and is

(i) for the acquisition of, or the use of, or the right to use, land, except as provided by paragraph (1)(b), (c) or (d);

This subparagraph refers to costs associated with the purchase or lease of land for the project, other than the costs (described in Section 2.4 (b) to (d) of this Guide) that relate to temporary access to the project site.

(ii) for grading or levelling land or for landscaping, except as provided by paragraph (1)(b),

This subparagraph refers to grading or levelling or landscaping and surveying costs, other than those costs described in Section 2.4 (b) of this Guide that relate to the construction of a temporary access road.

(iii) payable to a non-resident person or a partnership other than a Canadian partnership (other than an expense described in paragraph (1)(g)),

This subparagraph refers to certain expenses payable to non-resident persons or a partnership any of the members of which is a non-resident (other than expenses for a test wind turbine that is part of a wind farm project).

(iv) included in the capital cost of property that, but for this section, would be depreciable property, except as provided by paragraph (1)(b), (d), (e), (f) or (g),

This subparagraph refers to costs that would otherwise be included in the capital cost for the acquisition of depreciable property, other than the costs described in Section 2.4 (b), (d), (e), (f), or (g) of this Guide.

(v) an expenditure that, but for this section, would be an eligible capital expenditure, except as provided by any of paragraphs (1)(a) to (e),

This subparagraph refers to certain intangible expenditures such as expenditures for the acquisition of rights or licences issued under governmental authority, other than those described in Section 2.4 (a) to (e) of this Guide.

(vi) included in the cost of inventory of the taxpayer,

This subparagraph refers to certain costs of inventory of the taxpayer such as the cost of spare parts that are used for repair and maintenance purposes, or the cost of stockpiles of fuel (e.g. piles of coal or wood waste).

(vii) an expenditure on or in respect of scientific research and experimental development,

This subparagraph refers to expenditures on or in respect of activities that involve the development of new clean energy generation or energy conservation technologies or advancements to such technologies.

(viii) a Canadian development expense or a Canadian oil and gas property expense,

This subparagraph refers to certain expenditures related to the acquisition and development of interests in mineral resources or petroleum and natural gas. The terms ***Canadian development expense*** and ***Canadian oil and gas property expense*** are defined in subsections 66.2(5) and 66.4(5) of the *Income Tax Act*.

(ix) incurred, for a project, in respect of any time at or after the earliest time at which a property described in Class 43.1 or 43.2 in Schedule II was used in the project for the purpose of earning income,

This subparagraph refers to expenses incurred at any time after a Class 43.1 or 43.2 property was used in the project to earn income.

(x) incurred in respect of the administration or management of a business of the taxpayer,

This subparagraph refers to general administration and overhead expenses of the taxpayer's business.

or

(xi) a cost attributable to the period of the construction, renovation or alteration of depreciable property, other than property described in Class 43.1 or 43.2 in Schedule II, that relates to

(A) the construction, renovation or alteration of the property, except as provided by paragraph (1)(b), (f) or (g),

or

(B) the ownership of land during the period, except as provided by paragraph (1)(b), (c) or (d).

This subparagraph refers to certain costs related to the period of construction, renovation or alteration of depreciable property, except those costs described in section 2.4 (b), (c), (d), (f) or (g) of this Guide.



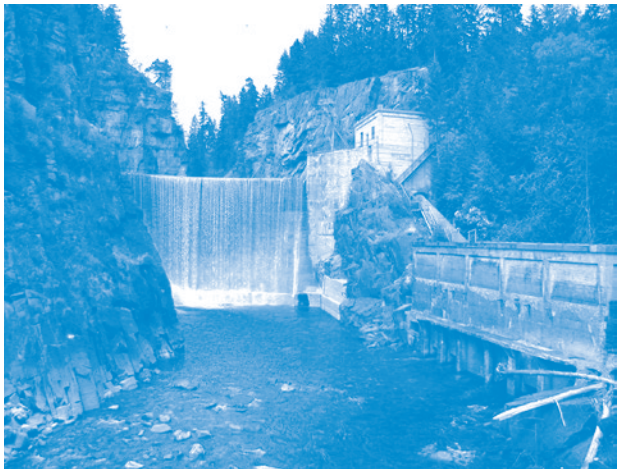
2.6 LEGISLATIVE HISTORY: CANADIAN RENEWABLE AND CONSERVATION EXPENSE

Section 1219 of the Regulations was added by P.C. 2000-1331, section 4, August 23, 2000, applicable to expenses incurred after December 5, 1996. This amendment introduced CRCE, which applies to certain start-up costs, as well as the cost of installing certain test wind turbines, in respect of projects the equipment for which is included in CCA Class 43.1 or 43.2.

The opening words to subsection 1219(1) were amended by P.C. 2005-1510, subsection 1(1), August 31, 2005, and are applicable to expenses incurred after April 8, 2005. This amendment included a reference to subsections 1219(3) and (4).

Paragraph 1219(1)(g) was also amended by P.C. 2005-1510, subsection 1(2), applicable to expenses incurred after July 25, 2002, to implement a measure first announced by the Minister of Finance on July 26, 2002, that allows, as CRCE, the cost of acquiring and installing more than one test wind turbine to be located at a wind farm under certain conditions. See Section 3.0 of this Guide for further information.

The opening words to subsection 1219(1) and paragraph 1219(1)(c) were amended by P.C. 2006-439, June 1, 2006, effective February 23, 2005, to add a reference to Class 43.2.



Subparagraphs 1219(2)(b)(ix) and (xi) were amended by P.C. 2006-439, June 1, 2006, effective February 23, 2005, to add a reference to Class 43.2.

Paragraph 1219(1)(f) of the Regulations was amended by S.C. 2010, chapter 25, subsection 77(1) December 15, 2010, (Bill C-47), to exclude as CRCE an expense in respect of a well that is, or can reasonably be expected to be, used for the installation of underground piping that is included in paragraph (d) of Class 43.1 or paragraph (b) of Class 43.2. This amendment applies to expenses incurred after May 2, 2010.

3.0 TEST WIND TURBINES

3.1 WHAT IS A TEST WIND TURBINE?

A test wind turbine is a wind energy conversion system installed at the site of a planned wind farm project for the purpose of testing the level of electrical energy production from wind at the place of installation prior to the construction of the wind farm project. More than one wind energy conversion system at a wind farm project may qualify as a test wind turbine.

To qualify as a test wind turbine under subsection 1219(3) of the Regulations, a proposed wind turbine system must meet the following requirements:

- The proposed wind turbine system must meet the requirements of a wind energy conversion system as set out in Class 43.1 or 43.2. The technical requirements for inclusion of a wind energy conversion system in Class 43.1 or 43.2 are described in the *Technical Guide to Class 43.1 and 43.2.*
- The CRA, in consultation with NRCan, must make a determination that the proposed wind turbine system meets the capacity restrictions, spacing requirements and testing protocols outlined in paragraphs 1219(3)(a) to (f) of the Regulations that are described in Section 3.3 of this Guide.

Until such time as the CRA, in consultation with NRCan, has determined that a proposed wind turbine system meets the requirements of a test wind turbine, the wind turbine system will not be eligible as a test wind turbine for purposes of subsection 1219(3) of the Regulations. Further, the cost of each test wind turbine will not qualify as CRCE under paragraph 1219(1)(g) of the Regulations until such time as it is commissioned and enters into service. Consequently, it is recommended that a request for an opinion as to the eligibility of a proposed wind turbine system as a test wind turbine be submitted prior to installation of the proposed wind turbine system, particularly where the cost of the proposed wind turbine system is to be renounced to flow-through shareholders (see Section 3.2 of this guide).

After the date that a favourable opinion letter for a test wind turbine is issued by the CRA to a taxpayer, if any of the details or information included in the application change, the taxpayer must submit a revised application following the procedures outlined below and receive confirmation that the cost of a wind turbine still qualifies for CRCE. Favourable opinions may be relied upon only if the proposed plans are carried out as described in the CRA opinion letter. The taxpayer must have the intention of owning and operating the wind farm project to which the test wind turbine relates. However, if a taxpayer's plan to develop the wind farm project does not proceed due to the generation of unfavourable test results from the test wind turbine or circumstances beyond the taxpayer's control, the cost of the test wind turbine will generally still qualify as CRCE, assuming that all the other criteria are met.

3.2 PROCEDURE TO OBTAIN A TECHNICAL OPINION AS TO THE ELIGIBILITY OF A PROPOSED TEST WIND TURBINE

Taxpayers who wish to obtain a written opinion from the CRA as to whether a planned wind turbine system will qualify as a test wind turbine under subsection 1219(3) of the Regulations and whether the cost of the planned wind turbine system will qualify as CRCE should complete and submit to NRCan and the CRA the following documents:

- a copy of Form 1.1 (Application for a Technical Opinion as to the Eligibility of a Proposed Test Wind Turbine under Subsections 1219(1) and (3) of the *Income Tax Regulations*) in Appendix I of this Guide;
- a Plan for the Development of a Wind Farm and Installation of Test Wind Turbines as per Form 1.2 (Outline of a Plan for Development of a Wind Farm and Installation of Test Wind Turbines) in Appendix I of this Guide;

and

- if a request for an opinion is submitted on behalf of a taxpayer by a third party, an authorization in writing by the taxpayer confirming that the third party is duly authorized to act on behalf of the taxpayer in respect of his or her request for a technical opinion.

These documents should be submitted in electronic format to the CRA and NRCan at the addresses listed in Section 1.3 of this Guide.

The Class 43.1 and 43.2 Secretariat at NRCan reviews the above-noted documents and provides written technical reviews to the CRA indicating whether a taxpayer's proposed wind turbine system meets the engineering and scientific requirements for a test wind turbine.

NRCan will provide a technical opinion to the CRA only on the eligibility, from an engineering and scientific perspective, of a proposed wind turbine system or systems as a test wind turbine, provided that:

- the taxpayer has submitted to NRCan and the CRA all of the information requested in Form 1.1 in Appendix I for the wind farm project where the wind turbine or wind turbines will be installed;
- the taxpayer has submitted to NRCan and the CRA an Outline of a Plan for the Development of a Wind Farm and Installation of Test Wind Turbines as outlined in Form 1.2 in Appendix I for the wind farm project where the wind turbine or wind turbines will be installed;

and

- the taxpayer has title to, a lease agreement for, or options to buy or lease the land required for the planned wind farm project. In the case where the land is leased, the lease agreement should specify that the taxpayer retains ownership of the wind turbine systems and that they will be removed by the taxpayer at the end of the term of the lease or renewal.

After NRCan's review of the documents, the Directorate at the CRA conducts its review of the Outline of a Plan for the Development of a Wind Farm and Installation of Test Wind Turbines and advises the taxpayer, in writing, of its opinion on the eligibility of the proposed wind turbine system as a test wind turbine and its related cost as CRCE.

3.3 CRITERIA TO DETERMINE THE ELIGIBILITY OF A TEST WIND TURBINE

Subsection 1219(3) of the Regulations requires that the Minister of National Revenue make a determination in consultation with the Minister of Natural Resources as to whether a fixed location device that is a wind energy conversion system qualifies as a test wind turbine.

The engineering and scientific criteria for a test wind turbine are set out in paragraphs 1219(3)(a) to (f) of the Regulations as follows:

(a) the device is installed as part of a wind farm project of the taxpayer at which the electrical energy produced from wind by the device, and by all other test wind turbines that are part of the project, does not exceed

(i) one third of the project's planned nameplate capacity if

(A) the Minister of Natural Resources determines that the project's planned nameplate capacity is limited from an engineering or scientific perspective,

and

(B) the project's planned nameplate capacity does not exceed six megawatts,

or

(ii) 20% of the project's planned nameplate capacity, in any other case;

(b) the project does not share with any other project a point of interconnection to an electrical energy transmission or distribution system;

(c) if the project does not have a point of interconnection to an electrical energy transmission or distribution system, the project has a point of interconnection to an electrical system

(i) of the taxpayer

(A) which system is more than 10 kilometres from any transmission system and from any distribution system,

and

(B) from which system at least 90% of the electrical energy produced by the project is used in a business carried on by the taxpayer,

or

(ii) of another person or partnership that deals at arm's length with the taxpayer

(A) which system is more than 10 kilometres from any transmission system and from any distribution system,

and

(B) from which system at least 90% of the electrical energy produced by the project is used in a business carried on by the other person or partnership;

(d) the primary purpose for installing the device is to test the level of electrical energy produced by the device from wind at the place of installation;

(e) no other test wind turbine is installed within 1500 metres of the device;

and

(f) no other wind energy conversion system is installed within 1500 metres of the device until the level of electrical energy produced from wind by the device has been tested for at least 120 calendar days.

3.4 LEGISLATIVE HISTORY: TEST WIND TURBINES AND CRCE

Section 1219 of the Regulations was added by P.C. 2000-1331, section 4, August 23, 2000, applicable to expenses incurred after December 5, 1996. In this regard, subsection 1219(3) of the Regulations was introduced to provide that, for the purpose of paragraph 1219(1)(g) of the Regulations, a wind energy conversion system is a test wind turbine only if:

- the device would otherwise be included in Class 43.1(d)(v) of Schedule II to the Regulations,

and

- it is determined by the Minister of National Revenue, in consultation with NRCan,
  - to be the first such device installed at the taxpayer's site for a proposed wind energy conversion system,

  and
  - to be a device that has as its primary purpose the testing of the level of electrical energy production at the site.

Subsection 1219(3) was amended by P.C. 2005-1510, subsection 1(4), August 31, 2005, applicable to expenses incurred after July 25, 2002. These amendments implement a measure first announced by the Minister of Finance on July 26, 2002, that allows, as CRCE, the cost of acquiring and installing more than one test wind turbine to be located at a wind farm under certain conditions. These conditions include a minimum spacing of 1500 metres between each test wind turbine and a separate point of interconnection between the taxpayer's wind farm project and an electrical energy transmission system. The amendments clarified that the primary purpose of installing the device must be to test the level of electrical energy produced by the device from wind at the place of installation by defining capacity restrictions.

Subsection 1219(4) was added by P.C. 2005-1510, subsection 1(5), August 31, 2005, applicable to expenses incurred after April 8, 2005. This amendment states, for greater certainty, that wind turbines are not eligible CRCE unless they are test wind turbines.

The opening words to subsection 1219(3) were amended by P.C. 2006-439, subsection 5(5), June 1, 2006, effective February 23, 2005, to add a reference to Class 43.2.

Subparagraph 1219(3)(a)(i)(A) was amended by P.C. 2007-849, section 3, May 31, 2007, to change "in the opinion of the Minister of Natural Resources" to "the Minister of Natural Resources determines that."

APPENDIX I

APPLICATION AND REPORTING FORMS

This appendix contains forms that can be used when making an application for a technical opinion as to the eligibility of a proposed test wind turbine and reporting test results from a test wind turbine.



FORM 1.1 · APPLICATION FOR A TECHNICAL OPINION AS TO THE ELIGIBILITY OF A PROPOSED TEST WIND TURBINE UNDER SUBSECTIONS 1219(1) AND (3) OF THE *INCOME TAX REGULATIONS*

1) APPLICANT INFORMATION

Date of Application: _____

Applicant Name: _____

Applicant Address: _____

Primary Contact: _____

Telephone: _____

Fax: _____

E-mail Address: _____

2) PLANNED WIND FARM PROJECT DETAILS

Name of the Planned Wind Farm Project (if available): _____

Capacity of the Planned Wind Farm Project: _____

Lands Under Control of the Applicant for the Planned Wind Farm Project (legal land description, total area):

_____

_____

Type of Land Control (e.g. owned, leased, optioned):

_____

_____

Owner of the Lands (if not the applicant) – name, address, telephone number:

_____

_____

Electrical Interconnection Point of the Planned Wind Farm Project (description, location):

_____

_____

_____

The applicant certifies that:

(a) the proposed test wind turbine or turbines will be installed as part of his or her wind farm project at which the electrical energy produced from wind by the test wind turbine and by all other test wind turbines that are part of the project will not exceed;

(i) one third of the project's planned nameplate capacity if;

(A) the Minister of Natural Resources determines that the project's planned nameplate capacity is limited from an engineering or scientific perspective (in this case, the applicant must provide an explanation acceptable to Natural Resources Canada (NRCan) as to why the nameplate capacity of the planned wind farm project is limited from a scientific and engineering perspective);

and

(B) the project's planned nameplate capacity does not exceed six megawatts;

or

(ii) 20 percent of the project's planned nameplate capacity, in any other case;

Yes ( ) No ( )

(b) the project does not share with any other project a point of interconnection to an electrical energy transmission or distribution system;

or

(c) if there is no point of interconnection to an electrical energy transmission or distribution system, the project has a point of interconnection to an electrical system;

(i) of the applicant

(A) which system is more than 10 kilometres from any transmission system and from any distribution system;

and

(B) from which system at least 90 percent of the electrical energy produced by the project is used in a business carried on by the applicant;

or

(ii) of another person or partnership that deals at arm's length with the applicant;

(A) which system is more than 10 kilometres from any transmission system and from any distribution system;

and

(B) from which system at least 90 percent of the electrical energy produced by the project is used in a business carried on by the other person or the partnership.

Yes ( ) No ( )

The information requested on Form 1.2 is required to evaluate this application. The applicant certifies that it is his or her intention to develop a wind farm as detailed in the documents submitted if the results of the wind testing program are favourable.

Yes ( ) No ( )

Reproduce and complete the following two sections (Sections 3 and 4) for each proposed test wind turbine at a wind farm project as needed in the case where it is proposed to install more than one test wind turbine at a planned wind farm project.

3) PROPOSED TEST WIND TURBINE DETAILS

Name of the Test Wind Turbine (if available):_____

Legal Land Description and Coordinates of the Place of Installation: (see Section 4.0 of Form 1.2)

_____

_____

Electrical Interconnection Description:

_____

_____

Test Wind Turbine Model and Rating:_____

Estimated Cost of the Installed Test Wind Turbine:_____

Expected In-Service Date of the Test Wind Turbine:_____

The applicant certifies that no other wind energy conversion system will be installed within 1500 metres of the proposed test wind turbine until the level of electrical energy produced from wind by the proposed test wind turbine has been tested for at least 120 calendar days.

Yes ( ) No ( )

The applicant certifies that no other test wind turbine will be installed within 1500 metres of the proposed test wind turbine.

Yes ( ) No ( )

4) AUTHORIZATION FOR EXCHANGE OF INFORMATION BETWEEN NRCAN AND THE CRA

The applicant hereby authorizes the exchange of information contained in this application between the NRCan Class 43.1 and 43.2 Secretariat and the CRA as required for the purpose of making a determination as to the technical eligibility of a proposed test wind turbine under section 1219 of the *Income Tax Regulations*.

Yes ( ) No ( )



5) SECURITY DESIGNATION

Information provided by the applicant in this request will be designated as PROTECTED-B. Protected Business Information is safeguarded in accordance with the security policy of the Government of Canada.

6) AGREEMENT TO PROVIDE TEST WIND TURBINE DATA (OPTIONAL)

The applicant agrees to meter the electrical energy production of the proposed test wind turbine separate from any other test wind turbine for the first year of operation. The applicant agrees to submit the following data from the proposed test wind turbine on a quarterly basis to NRCan for a period of 12 months following the date of commissioning of the proposed test wind turbine: monthly electricity production in kilowatt-hours, monthly availability, and, where available, hourly and monthly averages of wind speed at hub height in metres per second. NRCan will treat this data as Protected Business Information for a period of two years following the date of commissioning of the proposed test wind turbine. After the two-year period, the applicant agrees that NRCan may release the monthly production data to the public.

Yes ( ) No ( )

7) AGREEMENT TO PROVIDE ANNUAL REPORTS ON THE INSTALLATION OF WIND TURBINES (OPTIONAL)

The applicant agrees to provide annual reports upon request to NRCan on the number of wind turbines that are installed each year at his or her wind farm project.

Yes ( ) No ( )

8) CERTIFICATION

I certify that the information that is provided in this application is true.

Dated at _____ on_____ , _____

Corporate Seal of Applicant

_____

Signature of the Authorized Officer of the Applicant

_____

Name and Title (in block letters)



9) SUBMISSION OF APPLICATIONS

Submit one copy of this form together with all supporting documents to each of the following offices:

Income Tax Rulings Directorate
Legislative Policy and Regulatory Affairs Branch
Canada Revenue Agency
Place de Ville, Tower A, 16th Floor
320 Queen Street
Ottawa ON K1A 0L5

Tel.: 613-957-8953
Fax: 613-957-2088

E-mail: itrulingsdirectorate@cra-arc.gc.ca

Class 43.1 and 43.2 Secretariat
Industrial Innovation Group
CanmetENERGY, Natural Resources Canada
Building 3, Room 204
1 Haanel Drive
Ottawa ON K1A 1M1

Tel.: 613-996-0890
Fax: 613-995-7868

E-mail: Class43_1@NRCan-RNCan.gc.ca

10) CONTACT FOR FURTHER INFORMATION

Class 43.1 and 43.2 Secretariat
Industrial Innovation Group
CanmetENERGY, Natural Resources Canada
Building 3, Room 204
1 Haanel rive
Ottawa ON K1A 1M1

Tel.: 613-996-0890
Fax: 613-995-7868

E-mail: Class 43_1@NRCan-RNCan.gc.ca



FORM 1.2 · OUTLINE OF A PLAN FOR DEVELOPMENT OF A WIND FARM AND INSTALLATION OF TEST WIND TURBINES

The information requested in this form is required to evaluate an "Application for a Technical Opinion as to the Eligibility of a Proposed Test Wind Turbine Under Subsections 1219(1) and (3) of the *Income Tax Regulations*."

Applicants must submit a written plan (including the required maps) with their application, addressing the following points:

1.0 Wind Farm Opportunity

- location of the planned wind farm (the "project")
- resource assessment to date at the site
- details of the site control/land ownership and current land use
- site development issues and the need for an exploratory wind turbine program

2.0 Planned Wind Farm Development

- planned layout of the wind turbines
- rationale for the layout of the wind turbines
- grid connection details/ownership of the interconnection equipment
- discussion of the potential grid upgrades in the area
- status of the environmental assessments/municipal approvals
- installation schedule
- market/customers for electricity to be generated by the project
- power purchase agreement for the test wind turbine and infill wind turbines
- whether the taxpayer will receive all the revenue from the sale of electricity generated by the project
- whether the taxpayer will be responsible for developing the project
- whether the taxpayer will own all the wind turbines relating to the project after the completion of the project and will operate the project
- where the land to be used for the project is leased, is the taxpayer required to remove the wind turbines from the land at the end of the lease

3.0 Proposed Test Wind Turbine Exploratory Program

- objectives of the exploratory program
- rationale for the proposed location of the test wind turbine(s)
- planned installation date or schedule
- grid connection details
- duration of the exploratory program
- reporting of data

4.0 Coordinates of the Test Wind Turbines

- Indicate the location of each test wind turbine and the infill turbines, using either:
  a) the longitude and latitude coordinate system, shown with degrees, minutes and seconds; or
  b) the UTM NAD83 coordinate system, shown with UTM, NAD83+ Zone No., Easting (metres) and Northing (metres).

5.0 Maps

- The applicant must include the following maps:
  a) a regional map showing the location of towns, highways and bodies of water in the vicinity of the proposed test wind turbine(s) and the project;
  b) a cadastral map showing the local property boundaries, the lands under control of the applicant, local electrical transmission or distribution lines and all other wind turbines within a three-kilometre radius of the project; and
  c) a relief map showing the topography of the lands for the project, planned access roads, the planned wind turbine layout and the interconnection plan for the project.

FORM 1.3 · TEST WIND TURBINE DATA REPORTING FORM FOR THE FIRST YEAR OF OPERATION

Complete a separate form for each test wind turbine that is part of the wind farm for the first year of operation if it has been agreed to provide such data.

1) COMPANY INFORMATION

Name:_____

Address:_____

Name of the Wind Farm:_____

2) TEST WIND TURBINE DETAILS

Name of the Turbine (if available):_____

Model and Power Rating of the Turbine:_____

NRCan File Number:_____

Location of the Turbine:_____

Hub Height of the Turbine:_____

Date of Commissioning:_____

3) FIRST YEAR OF OPERATION – MONTHLY DATA

Complete the following table or provide a spreadsheet.

Year	Month	Power Production (kWh)	Availability (percent)	Average Wind Speed at the Hub Height (m/s)
Yearly Total/Average				

4) FIRST YEAR OF OPERATION – HOURLY DATA

Provide a spreadsheet with the following columns: date, time, average hourly wind speed, average hourly power production.



APPENDIX II

CRCE PROJECT TABLE

PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE

The following table lists start-up activities in respect of clean energy generation or energy conservation projects that are typically eligible as CRCE. These activities include engineering and scientific activities as well as other activities. This table is provided for information purposes only. The determination as to whether a particular expense will be eligible as CRCE requires an examination of the facts of each particular project and is an income tax matter. The CRA has the authority for all income tax matters and consults with NRCan on engineering and scientific matters related to CRCE eligibility as the need arises. Anyone requiring further information concerning income tax matters should contact the CRA.

CRCE is applicable only to a project in which the majority of equipment to be used in the project in terms of capital cost is equipment that is described in Class 43.1 or 43.2. Class 43.1 and 43.2 sets out the following categories of equipment or systems:

- Cogeneration and Specified Waste-Fuelled Electricity Generation Systems
- Thermal Waste Electrical Generation Equipment
- Active Solar Equipment and Ground-Source Heat Pump Systems
- Small-Scale Hydroelectric Installations
- Heat Recovery Equipment
- Wind Energy Conversion Systems
- Photovoltaic Electrical Generation Equipment
- Geothermal Electrical Generation Equipment
- Landfill Gas and Digester Gas Collection Equipment
- Specified Waste-Fuelled Heat Production Equipment
- Expansion Engine Systems
- Systems to Convert Biomass into Bio-oil
- Fixed Location Fuel Cell Equipment
- Systems to Produce Biogas by Anaerobic Digestion
- Wave or Tidal Energy Equipment
- District Energy Systems/Equipment

For more information on what equipment and systems are included in Class 43.1 or 43.2, see the *Technical Guide to Class 43.1 and 43.2* published by NRCan.



PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE

(for all project categories, as applicable)

	PRE-FEASIBILITY STUDY ITEMS
1	Identify and quantify market opportunities for the energy/output produced, as applicable (e.g. electricity, heat, digester gas, landfill gas, bio-oil, biogas).
2	Obtain and analyze the data specific to the project, as applicable: • fuel options, source and cost (cogeneration) • compressor station options, quantity and cost of thermal waste and natural gas (enhanced combined cycle, thermal waste electrical generation) • regional insolation data (photovoltaics/solar heating) • regional soil and groundwater data (ground-source heat pump) • hydro station location options, river elevation profile, water flow data (small hydro) • sources of thermal waste, quantity, temperature, variability of supply (heat recovery, thermal waste electrical generation) • regional wind data (wind energy) • potential reservoirs, depth, temperature, pressure, size and chemical composition (geothermal electricity) • data from the sewage treatment facilities/landfill site (digester/landfill gas) • sources of eligible waste fuels (specified waste-fuelled heat production) • pressure-reducing station options, quantity and pressure of natural gas (expansion engine) • sources and quantities of wood waste or plant residues (bio-oil) • opportunities to produce hydrogen by electrolysis using electricity generated by photovoltaic, wind energy conversion or hydro-electric equipment (renewable energy fuel cell) • sources and quantities of organic waste (biogas) • regional wave, tide and icing patterns (wave and tidal) • opportunities for distributed energy, energy source and quantity (district energy)
3	Conduct an initial negotiation for the sale of the particular energy/output produced (quantity, quality and value), as applicable.
4	Determine the technology and capacity (quality, quantity, maximum, minimum, average) of the overall plant, array or recovery facilities, as applicable.
5	Identify the regional locations of potential sites.

PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE (for all project categories, as applicable)	
6	Identify the options at each particular site, as applicable: • fuel delivery, electrical connection, waste heat use, plant location (cogeneration/specified waste-fuelled electricity generation/enhanced combined cycle/thermal waste electrical generation) • collector layout, air/water quality, quantity, temperature, maximum, minimum, average (solar heating) • horizontal ground collector or vertical well (ground-source heat pump) • dam, penstock and powerhouse location, electrical connection (small hydro) • point of recovery, quantity, temperature, variability of supply, heat transfer media for extracting and transporting heat (heat recovery/thermal waste electrical generation) • layout of the wind turbines, access roads, electrical connection (wind energy) • layout of the panels, ground or roof mount, sunlight obstructions (photovoltaic) • layout of the wells, drilling permits, location of the drilling platforms* (geothermal electricity) • location of the gas production/collection and use equipment (digester/landfill gas) • eligible waste fuels/feed stocks sources of supply, transportation, storage and waste management (specified waste-fuelled heat production, bio-oil, biogas) • expansion engine connection, natural gas pipeline flow, pressure drop and variability (expansion engine) • electrolysis system integration with a clean electricity generation source, storage of the hydrogen produced by electrolysis, the electrical grid connection (renewable energy fuel cells) • shore/offshore location, floating/submerged technology (wave and tidal) • customers, the heat exchanger location, the pump and pipeline layout (district energy) * For geothermal projects, this would also include the identification of an exploration program (geological, remote sensing, geophysical and geochemical analysis).
7	Negotiate and obtain access to the site, building or process for testing and assessment.
8	Estimate project/operating costs and the overall feasibility.
	FEASIBILITY STUDY ITEMS
9	Market analysis: quantify the markets for the energy/output produced, as applicable (e.g. electricity, heat, digester gas, landfill gas, bio-oil, biogas), in terms of quality, quantity and value on a monthly and annual basis, including mass flows and/or energy balances.
10	Financial analysis: detailed cost analysis and financial feasibility assessment, including expected return on investment and sensitivity analysis



PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE

(for all project categories, as applicable)

11	Collection and preliminary analysis of the site data, as applicable to the project: • air temperature and humidity, soil bearing capacity, waste heat flow and temperature (cogeneration/specified waste-fuelled electricity generation/enhanced combined cycle) • meteorological, insolation and snow cover (active solar, photovoltaic) • soil thermal response, groundwater characteristics, soil profile (ground-source heat pump) • water flow on a weekly/monthly basis, frequency distribution and average of water flows, meteorological, elevation and soil/fill/bed rock/river bank/river bottom data (small hydro) • quantity of recoverable energy, temperature, variability of supply, heat transfer media (heat recovery, thermal waste electricity generation) • topography, wind speed profile with base station and satellite monitoring equipment, wind turbulence and shear with Sodar and Lidar equipment, upper air model development, electrical energy production with a test wind turbine* (wind energy) • temperature gradient, soil strata, reservoir limits and characteristics of geothermal fluids by drilling of test wells, stratigraphic drilling and deep coring (geothermal electricity) • sewage available, landfill volume, digester/landfill gas production study, quantity and quality (heat content and impurities) of recoverable gas, drilling of exploratory landfill wells to define the size of the resource (digester/landfill gas) • eligible waste fuel, organic waste and plant residue quantity; sources and variability of the supply, quality (heat and moisture content, physical properties), transportation, storage (eligible waste-fuelled heat production, bio-oil, biogas) • natural gas quantity, variability of flow, pressures and temperature; meteorological data (expansion engine) • average wind speed, solar insolation or stream flow available to generate electrical energy for electrolysis; capacity of electrolysis, hydrogen storage and fuel cell equipment (renewable energy fuel cells) • heights and frequency of waves and tides, water current strength (wave and tidal) • aggregate consumer loads, annual energy demand, peak demand, base load, system load curve, load duration curve, capacity of thermal energy source (district energy) * NOTE: As explained in Section 3.0 of the *Technical Guide to Canadian Renewable and Conservation Expenses (CRCE)*, subsection 1219(3) of the Regulations requires that the Minister of National Revenue make a determination in consultation with the Minister of Natural Resources as to whether a fixed location device that is a wind energy conversion system qualifies as a test wind turbine.



PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE

(for all project categories, as applicable)

12	Initial design of the overall plant's flow systems and preparation of single-line drawings, as applicable: • calculation of the energy and mass flows • analysis of the fuel, feedstock handling, upgrading, purification, supplementation and storage requirements • determination of the number of wells/collectors/turbines to be used • determination of the strategy for disposal of thermal waste/reinjection of geothermal fluids
13	Determine the capacity, optimum design (including the power cycle where relevant) and specifications of the major pieces of equipment and make a list of potential suppliers for each.
14	Determine the general plant and/or site layout and equipment arrangement.
15	Negotiate the purchase of fuel(s) and/or rights to feed stocks, thermal waste, heat, geothermal reservoirs and/or renewable energy resources, as applicable (price, quantity, firm or interruptible supply agreements).
16	Obtain commitment for and negotiate the sale of the energy/output produced, as applicable (e.g. electricity, heat, heated air/water/thermal fluid, digester gas, landfill gas, bio-oil, biogas, price, quantity, penalties).
17	Electrical interconnection and/or grid integration study, as applicable
18	Conduct initial negotiations with authorities on regulatory requirements and the need for official assessments and public hearings or consultations with regard to impacts of the project as applicable (e.g. environment, deforestation, fishery, wildlife, land and river use, river bank and bottom preparation, flooding, groundwater use, building codes, noise, emissions levels, containment of runoff, storage of fuels and waste materials, archaeological, prospectus and initial application to an Energy Project Review).
19	Determine the need for and/or obtain the permits (e.g. land clearing, drilling and building permits), licences or approvals required.
20	Conduct socio-economic studies to assess the feasibility and the support from stakeholders, regulators and potential customers.
21	Prepare bid documents for engineering and construction of the project.



PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE (for all project categories, as applicable)	
22	Determine infrastructure costs: availability and cost of skilled and non-skilled manpower needed for construction, water, chemicals, the local union labour situation, availability of supply and storage for equipment and construction materials, transportation.
23	Determine the legal and consulting services associated with the above negotiations.
	PROCESS ENGINEERING
24	Process engineering: • collection and analysis of site data, as applicable (see Item 11 above) • calculation of the energy, mass, water or air balances • simulation and analysis of the performance and cost of various process design options • selection of the optimum process design
25	Negotiate and finalize the contract for sale of electricity (including wheeling contracts, export approvals, permits or licences) or other energy/output produced, (e.g. steam, heated air/water/ thermal fluid, digester gas, landfill gas, bio-oil, biogas) as applicable.
26	Negotiate and pay the interconnection fees (e.g. connection to the electrical utility grid or natural gas network), as applicable.
27	Negotiate and finalize the contract(s) for purchase or use of fuels/feed stocks/thermal waste/ renewable energy resources, as applicable: • fuel (including fossil, eligible waste and supplemental fuels) • thermal waste and/or heat • feedstock for biogas production • digester gas from sewage treatment plant • use of a landfill site • use of a geothermal reservoir • use of river water (maximum, minimum, average allowable monthly flows, water quality up and downstream of the dam) • use of a wave or tidal resource

PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE (for all project categories, as applicable)	
28	Negotiate, finalize and purchase rights and/or conditions of access to and use of the site during construction and commissioning, where applicable.
29	Negotiate and finalize agreements with the regulatory authorities, as applicable: • water quality upstream and downstream of dam/generators • fish monitoring (species, migratory spawning impacts, fish ladder use) • environmental abatement/compliance • land use • reservoir use • emissions levels • noise • building codes • obtain/pay for permits/licences/approvals
30	Pay for/obtain permits (e.g. building), approvals, licences, inspection fees and payment schedules from local authorities.
31	Obtain approval for road use during construction.
32	Obtain approval for the supply of utilities/services (e.g. electrical, telephone, Internet, water, sewer use, garbage collection/disposal) and storage for equipment and construction materials.
33	Obtain approvals for environmental compliance during construction, a schedule for deforestation, land clearing and levelling, as applicable (e.g. schedule for the construction and demolition of temporary coffer dams for diversion of water [small hydro])
34	Hearings and public consultations
35	Regulatory submissions and board approvals
36	Legal and consulting services associated with negotiations, hearings, submissions, licences, etc.
37	Clearing land to the extent necessary to complete the project (removal of trees, stumps, shrubbery or boulders)

PROJECT DEVELOPMENT ACTIVITIES TYPICALLY ELIGIBLE AS CRCE (for all project categories, as applicable)	
38	Install and maintain temporary facilities, as applicable: access roads, fences, field offices/work shops/warehouses, guard house, sanitary facilities, construction camp, electricity, water, fuel, parking areas, storage areas for major equipment and construction materials.
39	Pre-start up training of operating and maintenance personnel
40	Commissioning and start up of plant
41	Pre-start up environmental monitoring