



Canada Excellence  
Research Chairs

Chaires d'excellence  
en recherche du Canada



## **The Canada Excellence Research Chairs Program (CERC)**

### **Background Information and Guidelines Review Panel**

**Phase 2, 2013**

Canada Excellence Research Chairs Program  
350 Albert Street, Ottawa, ON K1P 6G4  
Phone (613) 613-943-3087 Fax (613) 943-3282  
[www.cerc.gc.ca](http://www.cerc.gc.ca)



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## **I - BACKGROUND INFORMATION**

### **The Canada Excellence Research Chairs Program**

Launched in 2008, the Canada Excellence Research Chairs (CERC) Program supports Canadian universities in their efforts to build on Canada's growing reputation as a global leader in research and innovation. This prestigious program awards world-renowned researchers and their teams up to \$10 million over seven years to establish ambitious research programs at Canadian universities. In May 2010, the first group of Canada Excellence Research Chairs was announced, and 18 chairs are now in place across the country.

In June 2011, the Government of Canada announced new investments in the program and eleven new Canada Excellence Research Chairs will be awarded. In this competition, the \$10 million award must be matched by external sources bringing the investment in CERCs to at least \$20 million over seven years. The CERCs will be allocated in the following areas and sub priority areas:

#### **Environmental Sciences and Technologies (at least 1 chair):**

- water (health, energy, security)
- cleaner methods of extracting, processing and utilizing hydrocarbon fuels, including reduced consumption of these fuels

#### **Natural Resources and Energy (at least 1 chair ):**

- Energy production in the oil sands;
- The Arctic (resource production, climate change adaptation, monitoring);
- Biofuels, fuel cells and nuclear energy.

#### **Health and Related Life Sciences and Technologies (at least 1 chair ):**

- Regenerative medicine;
- Neuroscience;
- Health in an aging population;
- Biomedical engineering and medical technologies.

#### **The “digital economy”(at least three chairs):**

- Capacity to innovate using digital technologies;
- Building a world-class digital infrastructure;
- Growing the information and communications technology industry;
- Digital media-creating Canada's digital content advantage;
- Building digital skills for tomorrow;
- Research in the digital area.

#### **Open areas of inquiry**

The remaining CERCs can be in any area provided that institutions demonstrate how the research would be of benefit for Canada.

## Governance and Management of the CERC Program

The Canada Research Chairs Secretariat is responsible for the day-to-day administration of the Program. The Secretariat reports to a Steering Committee that provides strategic direction for the Program. The Steering Committee comprises the presidents of the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes for Health Research (CIHR), the Canada Foundation for Innovation (as an observer), and the Deputy Ministers of Industry Canada and Health Canada.

## II – OVERVIEW OF THE EVALUATION PROCESS

CERCs are awarded through a two-phase competitive process. In Phase I, 46 universities competed for the opportunity to establish these prestigious chairs at their institution, based on the following criteria:

1. The institution's research strengths in the proposed field, assessed against global standards of excellence;
2. The promise of the proposed field of research for the chair, measured in the context of leading global research in the proposed field; and the likelihood that the work associated with the proposed chair will be recognized as globally relevant and will advance the frontiers of research in the field on a global scale;
3. The extent to which the proposal fits in one or more of the priority and sub-priority areas identified or addresses other issues of benefit to Canada;
4. The ability of the university to sustain the research advantage created by the proposed chair after the seven-year term of the chair expires;
5. The ability of the institution to leverage additional resources that, together with the CERC program, will enable the university to adequately support the direct and indirect costs associated with a world class program of research; and
6. The potential to apply the research results from the chair to advance public policy and/or the potential to commercialize research discoveries from the chair.

Eleven applications from eight universities have been invited to proceed to Phase 2 and nominate world-class researchers to the CERC position. The nominations will be assessed based on the following criteria:

1. Quality of the nominee
2. Quality of the proposed program of research
3. Fit with the university's proposal in Phase 1
4. Quality of the institutional recruitment process

The review panel will only assess the first three criteria, which relate to the scientific merit of proposals. Criterion 4 will undergo a distinct review process.

The assessment process in Phase II is comprised of four levels:

- **External reviewers** – Individual experts provide a written report on the proposal. A distinct set of external reviewers will provide feedback on the scientific criteria (1-3). Another set of reviewers will assess the quality of the recruitment process (criterion 4).
- **Review Panel** – Comprised of renowned Canadian and international researchers, its mandate to assess applications in terms of excellence, based on the evaluation criteria set out for program and informed by external assessments. The Panel provides a rating and comments on the strengths and weaknesses of the proposal for each of the

evaluation criteria (1-3). Its scientific assessment-- which is not a recommendation -- is transmitted to the Selection Board.

- **Selection Board** – The majority of the selection board members are world-renowned international and Canadian experts. The Board also includes a distinguished Canadian as Chair, the Vice-Chair of CIHR's Council, the Vice-President of NSERC's Council, the Vice-President of SSHRC's Council, and the Deputy Minister of Industry Canada as an observer. Its mandate is to ensure that nominations meet the expectations of excellence established for the program and that the proposals under evaluation reflect the strategic priorities set out by the government. The Board reviews the proposals with input from the review panel assessment, and conducts the review of the quality of the recruitment process (criterion 4). The Board then makes funding recommendations to the Steering Committee.
- **Steering Committee** –The Committee is responsible to review the evaluation process to ensure that it was rigorous, objective, transparent and consistent with the objectives of the program. The Committee makes final decisions on funding.

### III – ROLE OF THE REVIEW PANEL IN PHASE 2

#### Overview

The Review Panel's role is to provide peer review of the 11 nominations submitted to the Program. The Panel will evaluate the information presented in the application in relation to the *Quality of the nominee*, the *Quality of the proposed program of research*, and the *Fit with the university's proposal in Phase 1*. It will provide one of the following ratings on each criterion:

1. Fully satisfies and exceeds;
2. Fully satisfies;
3. Does not fully satisfy;
4. Does not satisfy.

The Panel's ratings and comments on each criterion will be transmitted to the Selection Board and to applicants.

Because nominations will be submitted with no fixed deadline, they will not be examined in a comparative context. **Therefore, an important role of the Panel is to ensure a consistent approach to assess excellence for all nominations.** In order to assist the Panel and external reviewers in their task, indicators and a graduated scale for each of the three criteria has been developed (see Appendix B).

#### Considerations

The Review Panel's assessment will take into account that both rising stars and established leaders may be nominees and that candidates at different career stages should be treated equitably. The same consideration will apply to non-academics nominated for a CERC.

Canadian nominees are eligible to the program provided that they are not affiliated with the institution making the nomination. However, applicants will have to demonstrate convincingly what is "game changing" and transformative in moving a researcher from one Canadian university to another that warrants the disruption at the "losing" institution, hence the net benefit to Canada. Applicants should explain what can be achieved through concentrating resources that could not be achieved through collaboration.

## **Review process**

External reviews: A minimum of three external reviews will be secured for each nomination. As soon as the reports are received, they will be forwarded to Panel members. In the event that the three reviews are not received by 5 p.m. the day prior to the teleconference, the review of the nomination will be delayed to the next teleconference of the Panel.

Assignment of readers: Each proposal will be assigned to three Panel members for in-depth review (designated readers 1, 2 and 3)<sup>1</sup>, recognizing that some proposals will not be within their specific area of expertise. In preparation for the meeting, readers should rate each of the three criteria, assisted by the graduated rating scale provided to the external reviewers.

Advance work of members: All Review Panel members should read the proposals before the committee meeting and be ready to discuss them.

Teleconference: The co-chairs will ensure that conflicts of interest are declared and managed. They will provide an overview of the process and address related questions. They will invite Reader 1 to present the application with his/her ratings and the rationale for these. Readers 2 and 3 will then do the same. Criteria where there are significant discrepancies among the three readers' preliminary ratings will receive particular attention. The Review Panel will select a "consensus" rating on each criterion and discuss the reasons for their ratings. The co-chairs will summarize the comments that will be transmitted to the Selection Board and to applicants.

CERC staff: CERC staff assist co-chairs in ensuring that program policies and guidelines are followed. They act as Panel secretaries and prepare a summary highlighting the strengths and weaknesses of each application on the basis of the Review Panel consensus. The readers on each proposal will be asked to approve this summary for accuracy before it is sent to the Selection Board.

## **IV - THE CERC CODE OF PRACTICE**

### **Statement on Ethics**

The Canada Excellence Research Chairs Program and those involved in it must uphold the highest ethical standards in order to merit the trust and confidence of the research community, the government, and the public at large. Members of the Panel are appointed as individuals; they are not the advocates or representatives of their disciplines. Their duty is to make the best possible objective assessment based on the merit of the nominations submitted.

### **Conflict of Interest**

If there is any potential for a real or perceived conflict, there must be full and open disclosure. Where a conflict is found to exist, members will be expected to take whatever measures are necessary to uphold the integrity of the evaluation process.

Reviewers are in a conflict of interest if they:

- are affiliated with the nominating institution (including hospitals and research institutes) or with an organization receiving financial support from the nominating institution;

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<sup>1</sup> The Secretariat will take into account conflicts of interest in the assignment of readers.

- have held a position at the institution applying to the program in the last five years;
- have collaborated with the nominee in the last five years (e.g., have published, have been a co-researcher with the nominee);
- have a personal relationship with the nominee (including close friends, relatives, former thesis supervisors or similar supervisory relationships, or students previously under the nominee's supervision);
- are involved in the proposed program of research;
- were shortlisted as a candidate for this Chair at the same time as the nominee; or
- benefit from the outcome.

Please review the application, in particular if you are assigned as reader. Identify if you are in a conflict of interest. We ask that you refrain from commenting on any such files and inform the CERC Secretariat of the conflict immediately. If you suspect but are not certain that a conflict of interest exists, please contact the CERC program officer.

The committee Chair will discuss with the CERC staff what measures, if any, are required to ensure that the public interest is protected. Disclosures and compliance measures will be documented and retained for the record.

### **Confidentiality and Non-Disclosure**

Documentation provided by the CERC Secretariat to members of the Panel contains confidential information. Documentation must therefore be treated as strictly confidential. Review documentation provided to members must be used only for the purpose for which it was originally collected, i.e., assessing the CERC applications. It must not be used for any other purpose or discussed with or disclosed to others. All members are required to sign the *Conflict of Interest, Confidentiality and Non-disclosure Declaration* and return it to the Secretariat.

## **ANNEX A**

### **Roles and Responsibilities**

#### **Co-chairs of the Review Panel**

The Co-chairs ensure that the Panel carries out its work with fairness, thoroughness and integrity and that the Program's policies and procedures are observed. They ensure the orderly and complete evaluation of applications and the transmission of ratings and critical comments on all the nominations. They ensure:

- that conflicts of interest are managed;
- that the Panel's approach to the review is consistent and fair;
- that all important aspects of proposals are considered;
- that a consensus is reached for all applications;
- that the quality of the peer review process is upheld throughout the process.

Co-chairs may bring their expertise to bear on files as discussants but in such cases they must pass on the chairing to other co-chair.

The Co-chairs also lead Panel discussions on policy and program issues and advise the Secretariat on these as required.

#### **Members of the Panel**

- read all applications thoroughly and are ready to discuss them;
- present in-depth evaluations for the applications assigned to them as readers;
- adhere to the CERC guidelines and regulations on the review of applications, conflict of interest, communication with applicants and confidentiality; this includes that members must not impart, refer to, or consider information about the applicant that does not appear in the application materials.
- approve the summary that will be transmitted to applicants for the files on which they are readers.

#### **Secretariat staff**

- ensure that files are complete and eligible;
- ensure that the documentation transmitted to all the levels involved in the review process is complete and accurate;
- advise on the Program's policies, guidelines and procedures and bring any problem areas to the attention of the co-chairs;
- support the co-chairs in ensuring consistency in the evaluation of all applications;
- ensure that ratings and comments are accurately recorded and that the material sent to applicants reflects the consensus of the Panel.

## ANNEX B – DEFINITION OF RATINGS (CERC)

### Criterion 1 – Quality of the nominee

Taking into account stage of career, please consider the following indicators (described below to help your assessment):

1. Past accomplishments, including application of research findings for social and economic benefit
2. Recognition of the nominee as world leader or a rising star with exceptional potential
3. Record of attracting and supervising graduate students and postdoctoral fellows

Based on the indicators, please provide your rating on the quality of the nominee within the field or discipline:

● Fully satisfies and exceeds -Top 1%

● Fully satisfies - Top 5%

● Does not fully satisfy - Top 10%

● Does not satisfy <10%

Indicator 1:	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Past accomplishments, including application of research findings for social and economic benefits</b>	<ul style="list-style-type: none"> <li>paradigm changing discoveries transformed the research field,</li> <li>or created a new field of inquiry by integrating several different specializations and fields</li> <li>has/likely will produce important social- economic benefits</li> <li>sustained, high impact publication record</li> </ul>	<ul style="list-style-type: none"> <li>some highly significant discoveries with substantial impact on the field,</li> <li>or integrated different specializations and fields that provided answers to important questions</li> <li>has/likely will produce some social and economic benefits</li> <li>excellent publication record, may have some dips in quality or quantity</li> </ul>	<ul style="list-style-type: none"> <li>very good quality publication record</li> <li>impact within the discipline or beyond</li> </ul>	<ul style="list-style-type: none"> <li>consistent and recent publication record, but the quality and impact are average</li> </ul>

Indicator 2:	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Recognition as world leader or rising star with exceptional potential</b>	<ul style="list-style-type: none"> <li>considered among the world leaders in the field, or will to reach this status within the next 10 years</li> <li>had a leadership role in several large projects, centers or networks</li> <li>successful in obtaining large grants</li> </ul>	<ul style="list-style-type: none"> <li>internationally recognised</li> <li>has led large collaborative projects</li> <li>sustained success in obtaining grants as principal investigator or equivalent (if outside of academia)</li> </ul>	<ul style="list-style-type: none"> <li>solid reputation, recognized nationally and perhaps internationally has some leadership credentials</li> </ul>	<ul style="list-style-type: none"> <li>reputation is within the norm of what is expected from someone at that career stage</li> </ul>



Indicator 3:	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Record of attracting and supervising graduate students and postdoctoral fellows</b>	<ul style="list-style-type: none"> <li>trained and mentored a significant number of graduate students, postdoctoral fellows or other scientists and HQP</li> <li>trainees occupy important positions and are successfully contributing to the field</li> </ul>	<ul style="list-style-type: none"> <li>trained a significant number of students, postdoctoral fellows or other scientists and HQP</li> </ul>	<ul style="list-style-type: none"> <li>training record is average, within the norm of what is expected in the field/sector (academia, industry government, etc).</li> </ul>	<ul style="list-style-type: none"> <li>training record is below average in the field/ sector.</li> </ul>

## Criterion 2 – Quality of the proposed program of research

Please consider the following indicators (described below to help your assessment):

1. Quality of the proposed project
2. Potential of the project to attract excellent trainees, students and future researchers

Based on the above indicators, please provide your rating on the quality of the proposed program of research:<sup>i</sup>

- Fully satisfies and exceeds -Top 1%
- Fully satisfies - Top 5%
- Does not fully satisfy - Top 10%
- Does not satisfy <10%

Indicator 1	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Quality of the proposed project</b>	<ul style="list-style-type: none"> <li>• has potential for scientific break-through</li> <li>• is bold/pioneering</li> <li>• may use new, unconventional methodologies</li> <li>• provides excellent translational possibilities</li> <li>• has significant potential for social-economic benefits</li> <li>• will provide university an opportunity to become the world leader in the field</li> </ul>	<ul style="list-style-type: none"> <li>• will open up new avenues of research</li> <li>• is innovative</li> <li>• has a solid methodology</li> <li>• will likely have some social-economic benefits</li> <li>• will provide university an opportunity to be considered as one of the leading centers in the field</li> </ul>	<ul style="list-style-type: none"> <li>• is not more than the continuation of the nominee's previous work</li> <li>• is excellent, well designed</li> <li>• has an appropriate methodology</li> <li>• will considerably strengthen the university's position in the field</li> </ul>	<ul style="list-style-type: none"> <li>• is very good</li> <li>• methodologically feasible,</li> <li>• but not exceptional.</li> </ul>

Indicator 2	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Potential of project to attract excellent trainees, students and future researchers</b>	<ul style="list-style-type: none"> <li>• will significantly expand training opportunities at the university</li> <li>• will likely be very attractive to the most outstanding students globally</li> <li>• will provide HQP a unique skill set and a career edge compared to their peers</li> </ul>	<ul style="list-style-type: none"> <li>• will be a major attractor of HQP</li> <li>• is well articulated</li> <li>• will train HQP with a highly desirable skill set</li> </ul>	<ul style="list-style-type: none"> <li>• has the potential to attract excellent trainees, students and postdocs</li> </ul>	<ul style="list-style-type: none"> <li>• the training potential is appropriate, but not outstanding</li> </ul>

### Criterion 3 - Fit with the university's proposal in Phase 1

(Refer to the Phase 1 proposal included in your package)

Please consider the following indicators (described below to help your assessment):

- (1) the fit with the vision and commitments outlined in the Phase 1 application;
- (2) the institutional research environment and the institutional commitment to the nominee;
- (3) the benefits of the proposed research and Chair to Canada; and
- (4) the extent to which any concerns raised in the evaluation of the Phase 1 application have been addressed.

Please indicate your global assessment of the fit between the nomination and the Phase 1 proposal:

- Fully satisfies and exceeds -Top 1%
- Fully satisfies - Top 5%
- Does not fully satisfy - Top 10%
- Does not satisfy <10%

Indicator 1:	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Fit with the vision and commitments outlined in the Phase 1 application</b>	<ul style="list-style-type: none"> <li>nominee is the most appropriate person to accomplish the goals outlined in phase 1</li> <li>fits with the vision and may be able to take it beyond</li> <li>if there is any deviation, the rationale is strong, and the goals of the proposal will be met or exceeded</li> </ul>	<ul style="list-style-type: none"> <li>nominee has the profile to accomplish the goals outlined in phase 1</li> <li>fits with the vision</li> <li>if there is any deviation, it is well justified and explained</li> </ul>	<ul style="list-style-type: none"> <li>nominee will be able to accomplish the most important goals outlined in phase 1</li> </ul>	<ul style="list-style-type: none"> <li>nominee's profile misses some important elements to achieve all the goals outlined in phase 1</li> </ul>

Indicator 2:	Fully satisfies/exceeds	Fully satisfies	Does not fully satisfy	Does not satisfy
<b>Institutional research environment and the institutional commitment to the nominee</b>	<ul style="list-style-type: none"> <li>excellent synergy between the existing institutional research strengths and the nominee's expertise</li> <li>exceptional commitment from the institution to capitalize on the expertise and efforts of the nominee during and after the term of the grant.</li> </ul>	<ul style="list-style-type: none"> <li>excellent fit between the existing institutional research strengths and the nominee's expertise</li> <li>Strong institutional commitment to achieve the objectives of the chair and build on this momentum after the term of the grant.</li> </ul>	<ul style="list-style-type: none"> <li>institutional environment and commitment are adequate</li> <li>improvements are required for the chair to achieve optimal results</li> </ul>	<ul style="list-style-type: none"> <li>institutional environment and commitment are missing important elements for the chair to succeed.</li> </ul>

<b>Indicator 3:</b>	<b>Fully satisfies/exceeds</b>	<b>Fully satisfies</b>	<b>Does not fully satisfy</b>	<b>Does not satisfy</b>
<b>Benefits of the proposed research and Chair to Canada</b>	<ul style="list-style-type: none"> <li>• will result in unique social-economic benefits</li> <li>• will make Canada the point of reference in this field.</li> </ul>	<ul style="list-style-type: none"> <li>• will result in important social-economic benefits</li> <li>• will make Canada one of the world leaders in this field.</li> </ul>	<ul style="list-style-type: none"> <li>• will likely result in some social-economic benefits.</li> <li>• will increase Canada's visibility in the field</li> </ul>	<ul style="list-style-type: none"> <li>• expected social – economic benefits are not clear</li> <li>• the advancement of Canada's position is uncertain</li> </ul>

<b>Indicator 4:</b>	<b>Fully satisfies/exceeds</b>	<b>Fully satisfies</b>	<b>Does not fully satisfy</b>	<b>Does not satisfy</b>
<b>Extent to which any concerns raised in the evaluation of the Phase 1 application have been addressed</b>	<ul style="list-style-type: none"> <li>• all concerns have been adequately addressed</li> <li>• proactive measures have been outlined to address any potential gap that may arise during the chair's tenure</li> </ul>	<ul style="list-style-type: none"> <li>• all concerns have been adequately addressed</li> </ul>	<ul style="list-style-type: none"> <li>• the major concerns have been adequately addressed, some minor concerns remain</li> </ul>	<ul style="list-style-type: none"> <li>• some major concerns remain unaddressed</li> </ul>