

**California Energy Commission's Public Interest
Energy Research Environmental Area
and
PRBO Conservation Science's**

**Biological Impacts of Climate Change
in California (BICCCA) Research Grants**

BACKGROUND AND PURPOSE

The California Energy Commission's Public Interest Energy Research Environmental Area (PIEREA) is undertaking a multi-disciplinary research effort on climate change in California (www.climatechange.ca.gov/research/). As part of this effort, PIEREA, in collaboration with PRBO Conservation Science (www.prbo.org), are developing a program for supporting graduate and post-doctoral researchers investigating the potential impacts of climate change on biological resources and systems. We encourage submissions for research in any California ecosystem (e.g. estuarine, marine, terrestrial).

The PIEREA Biological Impacts of Climate Change in California (BICCCA) Research Grants have three purposes. First, we anticipate that these grants will stimulate research by young scientists that will help us understand how the flora and fauna of California has, and could be, affected by climate change. The second purpose of the BICCCA program is to help foster a group of young interdisciplinary scientists by supporting their work, and by helping them to develop a network of colleagues engaged in scientific, resource management, and policy aspects of climate change issues. The third purpose is to compile research papers written by BICCCA program scholars into an edited volume similar to *Wildlife Responses to Climate Change: North American Case Studies*, edited by S. H. Schneider and T. L. Root in 2001. The new volume will concentrate on biological impacts of climate change in California, and will be edited by Dr. Terry L. Root (Stanford) and Dr. Kimberly R. Hall (Michigan State University). In addition to Root and Hall, Dr. Mark Herzog, Dr. Chrissy Howell, and Geoff Geupel (all from PRBO Conservation Science) will serve as mentors for the selected grant recipients.

BICCCA Research Grants are available to Masters' and Ph.D. students, and to post-doctoral researchers at the University of California, California State University, and Stanford University. The work we anticipate funding must focus on biological impacts of climate change in California. We anticipate offering 8-10 Fellowships in the 2007-2008 academic year. After ranking by the BICCCA evaluation team, each research project will be individually approved by the Energy Commission's Research, Development and Demonstration (RD&D) Committee prior to funding. The Energy Commission has expressed an interest in this field and funded many similar projects, however, the final list of grant recipients will be contingent upon the decision of the RD&D Committee.

The rest of this document outlines the parameters of the BICCCA program for graduate students and post-doctoral researchers, including eligibility, funding, program expectations, time schedule, and application guidelines.

ELIGIBILITY

Those eligible for BICCCA Research Grants for the academic year 2007-2008 include senior Graduate Students and Postdoctoral Scholars from the University of California system, California State Universities, and Stanford University. Graduate students must be pursuing a scientific research-based degree. Only those applicants proposing research that addresses the impact of global warming on California flora or fauna will be considered, and that research must be far enough along to be completed and described in a publication-quality manuscript within 1 year. The awardees must be able to attend a meeting of all of the grant recipients and mentors from October 12-14, 2007 at Stanford, and the PIER Climate Change Conference in September 2008 in Sacramento.

FUNDING FOR GRADUATE STUDENTS

The BICCCA Research Grants program will provide tuition and a stipend for one year at funding levels that are typical for each University, plus \$2,000 for travel/research expenses. Travel expenses incurred by attending the 2 mandatory meetings (listed above) will need to be taken out of this \$2,000 (i.e., we will not provide additional reimbursement for travel, lodging, and food expenses associated with the meetings). Funds to cover the student's benefits and each University's standard overhead costs will also be provided.

FUNDING FOR POSTDOCTORAL RESEARCHERS

The BICCCA Research Grants program will provide a stipend and benefits for one year, with the level determined in part by the applicant's past salary history. Overhead costs will be provided at the levels established by the applicant's institution. Travel expenses incurred by attending the 2 mandatory meetings will need to be taken out of this \$2,000 (i.e., we will not provide additional reimbursement for travel, lodging, and food expenses associated with the meetings).

EXPECTATIONS

As noted above, two mandatory meetings of all of the BICCCA Research Program participants and mentors will be held October 12-14, 2007 (at Stanford), and in September 2008. At these meetings, each grant recipient will present his or her research objectives and current findings. Each recipient's primary advisor is also welcome and encouraged to attend. At the first meeting, the grant recipients, along with several senior academics and policy makers, will meet together for a two-day, in depth discussion of each funded proposal. The second meeting will be held in conjunction with the PIER Climate Change Conference, with a separate BICCCA meeting two days before or after the conference. This timing will maximize opportunities for networking and sharing of information among the grant awardees and members of the climate change and energy research community.

The primary product expected from each of the BICCCA Research Grant recipients is a publication-quality manuscript generated from each recipient's research on the biological impacts of climate change in California. These manuscripts will be compiled and hopefully published together as an edited book, with each recipient's manuscript comprising a separate chapter. Additionally, these chapters will be compiled for immediate use by policy makers throughout California.

TIME SCHEDULE

April 25, 2007	Release of BICCCA RFP to California institutions and to the PRBO Conservation Science website.
June 4, 2007	Proposals must be submitted electronically to K.R. Hall (hallkim@msu.edu) by midnight California time.
June 6, 2007	Final date for acceptance of letters of support, due to K.R. Hall (hallkim@msu.edu) by midnight California time.
June 20, 2007	Evaluations of the proposals will be completed by Root, Hall, Herzog, Howell, Geupel and others, and selected projects will be submitted for approval to PIEREA.
July 2007	Successful applicants will be notified.
late August 2007	Funds will be available.
October 12-14 2007	First meeting (mandatory) at Stanford University.
September 2008	Second meeting (mandatory) 3 days at the PIER Climate Change Conference and 2 days for the BICCCA meeting; specific dates to be determined).

Please note that these dates might change due to factors not anticipated at the time when this RFP was posted.

APPLICATION GUIDELINES

To be supported through the BICCCA Fellowship program, graduate students and post-doctoral researchers must be engaged in research on single or multiple species, populations and/or communities of plants or animals in California. The work to be funded needs to already be far enough along so that with one more year of work a major paper can be written on the results.

Note that all parts of the application should be written for an audience that includes both scientists and policy-makers. Please use 12-point font and 1 inch margins on all components.

COMPONENTS OF THE APPLICATION

1. Research Summary. One page summary (include the project title, your name, and affiliation at the top) of your proposed work written in a manner understandable to general public, policy makers and the media that, if chosen for funding, is suitable to post on PIEREA and PRBO's websites.

2. Research Statement. This summary should be no longer than 1000 words, and should begin with a brief overview that explains how your ongoing work fits in with other work being done on the topic. The remaining text, which should be more detailed, should clearly define the goal(s) of your purposed study and identify the various steps (research objectives) that will allow you to achieve your goal(s). Include a brief description of your study design, the type of analyses you plan to use,

and your expected results. Please clearly state why this work is important in the context of PIEREA's constituents, the citizens of California. Figures, tables, and literature cited are not counted in the 1000 words, but figure and table legends should not exceed 50 words each.

If BICCCA funding would permit expansion of your current work, especially in a way that increases the potential for applying results to problems of interest to policy-makers and conservation professionals in California, please indicate the specific additions that the Fellowship would help support.

3. Budget.

For Graduate Students: Please list the amount required by your University for your tuition, stipend, benefits and overhead for one year (Sept 2007 - Aug 2008, or equivalent) using the format below. Note that all grant recipients will receive \$2,000 to cover attendance at the mandatory meetings (i.e., transportation, lodging, and meals). If this amount exceeds what is needed for attendance at the meetings, the remainder may be used for miscellaneous research expenses.

Tuition	\$
Stipend	\$
Benefits	\$
Travel/misc. research expenses	\$2,000
Overhead	\$
Total	\$

For Post-doctoral Scholars: In addition to a table like the one above (without tuition), please indicate the mandatory salary range set by your University for the level of position you will hold in the 2007-2008 academic year, list your salary history.

4. Cover letter/personal statement. In one page, please describe why you are interested in participating in the BICCCA program, including what you hope to gain from the experience, and your future career goals. Make sure to include your contact information (mail, email, and phone) in this letter.

5. Biographical sketch. Next, please attach a short biography, no more than 250 words, that provides information about your education, research interests, honors received, and the name of your advisor. Please end your biography with a list of your publications and talks. This list should not be counted in the 250-word limit.

6. Letters of support. A minimum of two letters of support must be emailed directly to Kimberly Hall (hallkim@msu.edu) by midnight on June 6, 2007. Support letters should be on official electronic letterhead and/or should contain an electronic signature, or can be scanned from paper copies (signed and on letterhead) and sent as a .jpg or other common image file format. Each letter should address your research skills and other merits, as well as the current status of the research described in the research statement. Therefore, when asking for a letter, please provide those writing on your behalf with a copy of your complete application. One of these letters needs to be from your academic advisor, and for graduate students the advisor should indicate progress toward the degree (e.g., completion of qualifying exams and other requirements). Letters from people engaged in policy or management activities that are part of a project team or otherwise familiar with your work, and can address how your results would feed into future policy or management decisions, are encouraged.

SUBMISSION ORDER

Please arrange your application in the following order within one file in either Word or PDF format:

- Cover Letter
- Research Summary
- Research Statement
- Budget
- Biographical Sketch

APPLICATION COMPLETION STATUS

Applicants that have submitted all of the application materials listed above will receive email confirmations of their application packet. In this email, the review committee will also notify the applicants as to support letters that have been received. Note that the due date for these letters is two days after the application is due. Because of the short time frame for reviewing applications, letters received past this deadline will not be accepted.

QUESTIONS

Contact Terry L. Root at troot@stanford.edu or Kimberly R. Hall at hallkim@msu.edu. Please include "BICCCA" in the subject line.

TIMING

The timing of the BICCCA research grants will be from late summer/fall 2007 to late summer/fall 2008. Specific dates will be determined by grant administrators at PRBO Conservation Science in cooperation with successful grant applicants and their University's contracts and grants office.

EVALUATION AND SELECTION OF SCHOLARS

Research proposals will be evaluated by a team led by Root and Hall that includes scientists from PRBO Conservation Science, and from both the University of California and California State University systems. The evaluation team will use the applicants' research statements, cover letters, biographical sketches, and letters of recommendation to evaluate the ability of the applicant to conduct and communicate research relevant to climate change impacts on the flora and fauna of California. Each request for funding will be judged on:

- Intellectual merit of the research;
- Scientific research skills of the applicant;
- Demonstrated ability of the applicant to work as part of a team addressing complex, applied problems;
- Willingness and ability of the applicant to communicate results to policy makers and resource managers; and
- Relevance of the research to policy, conservation, and resource management concerns in California.

From our applicant pool, we will seek to identify a cohort of grant recipients from different California Universities, and that includes Masters', Ph.D., and post-doctoral scientists. To maximize the BICCCA program's relevance to the needs of the citizens of California, an additional goal of the

selection committee will be to choose a suite of proposals that as a group address a diversity of species, locations, and ecosystem types within the state. Depending on the number of applicants and the range of projects proposed, the selection committee may choose to conduct phone interviews to help decide among high-ranking applicants.

This is an equal opportunity program open to all qualified persons without regard to race, sex, creed, age, sexual orientation, physical disability, or national origin.

AWARD NOTICES

A summary statement developed by the review panel will be provided to each applicant with an award or declination letter. If you are selected to receive a BICCCA Research Grant, you will be contacted in July of 2007, and soon after that should receive your official notification of award.

CONDITIONS OF RESEARCH GRANT AWARDS

Grant recipients are expected to be engaged in a full-time program leading to a Masters' degree or Ph.D., or to be a full-time post-doctoral scientist. Those who accept a BICCCA Research Grant must agree to the stipulations in the Terms of Appointment that will accompany the award letter. In addition, BICCCA Research Grant recipients must agree to participate in two meetings (paid for out of the travel funds), and to respond to contacts from the program during a five-year period after 2007-2008 during which we may conduct surveys designed to evaluate the impact of the program.

ACKNOWLEDGEMENT OF SUPPORT

PIEREA and PRBO Conservation Science expect to take great pride in the work that will be supported through this program, and PIEREA has an obligation to the citizens of California to keep them informed of how their state funds are being spent. In order to provide the public with this information, support from the BICCCA Research Grant program must be acknowledged in journal articles, oral or poster presentations, on web pages describing the research, and in interviews with members of the media.

