

Review of PACUR Non-Core Proposal Review Process

Background Material and Recommendations

Part A – Review Process

Charge to Review Committee

As a result of the June 7th President's Advisory Committee on University Relations (PACUR) meeting, a subcommittee was created to examine the UCAR non-core Proposal Review Process with the goal of streamlining the process by making it easier and less onerous on UCAR Principal Investigators (PIs) and their university collaborators. The proposal-review criteria, established collaboratively by NSF, UCAR, and PACUR, are not part of the committee review, but the internal controls, and the audit information provided to the PACUR, are within its scope.

Committee Membership

The committee is composed of members from the PACUR and staff from NCAR and UCAR. Jeff Trapp from Purdue University and Michael Wiltberger from NCAR, both current members of the PACUR, served as co-chairs of the committee. The University committee members are Simona Bordoni (CalTech), Yvette Richardson (Penn State), and Bob Street (Stanford). The UCAR/NCAR members of the committee are John Braun (COSMIC), Emily Doremire (Spark), Susan Friberg (UCAR), Valerie Koch (NCAR B&P), Hanne Mauriello (UCP), Jordan Powers (NESL/MMM), Matthias Steiner (RAL), and Christine Wiedinmyer (NESL/ACD).

Process and Timeline

After receiving the initial charge, the committee began the process by assembling a representative team of UCAR/NCAR personnel. The NCAR and UCAR members of this committee include ladder track scientists, project scientists, program managers, and budget personnel. The UCAR/NCAR members of the committee had two in-person meetings to review the process in detail, recognize areas of inefficiency, and begin to identify potential solutions.

A Ready-Talk meeting with all members of the committee was held on September 5th. The outcome of that meeting was a list of initial recommendations that was then circulated via email for additional comments and refinements. A final Ready-Talk meeting occurred on October 10th to review the documents and address the outstanding issues. This final report represents the conclusion of that process and contains the consensus recommendations of the committee.

Part B – Background Information

PACUR Review of UCAR Compliance

The Cooperative Agreement (CA) between NSF and UCAR for the operation of NCAR allows for NCAR scientists to participate in additional projects and seek outside funding for these projects as long as several criteria are met. The proposed activities must fall within the scope of NCAR's mission and not negatively impact the NSF-sponsored activities. Furthermore, NCAR must not compete unfairly with the university community and others when seeking outside funding. The CA requires that a retrospective review of the non-core proposals submitted by NCAR be conducted by a subcommittee of PACUR members and that a report summarizing this review be presented to NSF. The criteria followed during this subcommittee review were developed jointly by NSF, UCAR, and PACUR and are referred to in this report as the "proposal compliance criteria." The NSF examines the panel's report and addresses any major issues that are identified.

In order to conduct the review, the UCAR Budget Office provides the chair of the PACUR non-core proposal review subcommittee a list of all proposals submitted since the last review (reviews are carried out twice a year). This list includes basic information such as title, sponsor, level of funding requested, and degree of university collaboration. The chair selects a subset of proposals for in-depth review across UCAR Labs/Programs, collaboration type, and co-sponsorship levels. The UCAR Budget Office provides a detailed package including all supporting compliance documentation completed during the proposal submission process. The subcommittee provides a report on the review process and its findings to the full PACUR committee, which after acceptance is forwarded to the NSF.

UCAR Process and Internal Monitoring of Compliance

The non-core proposal process is designed to ensure compliance with the requirements for outside funding, and thus with the proposal compliance criteria. A key component of this process is currently implemented through the Advanced Notice (AN) webform that all PIs are required to complete as part of the proposal submission process. The AN form includes an abstract of the proposed work and the completion of a series of four questions that are designed to ensure compliance. The first question addresses mission appropriateness. The second question assesses a fair (non-competitive) utilization of NCAR resources, including high performance computing. The third question quantifies the level of collaboration with university partners, with answers ranging from funded collaboration (types 3a and 3b), to unfunded collaboration (3c), and no direct university involvement (3d). The fourth question asks if there is any co-sponsorship (e.g., salaries and computing cycles) that is being offered to support the effort.

A brief review of the proposal submission process, as influenced by the compliance criteria, provides further details on how UCAR ensures compliance. This proposal submission process begins with the PI identifying an idea for their proposal and finding

the appropriate place for its submission. The PI then begins to assemble the investigator team, the budget, and supporting documentation. Also, at this time, the PI must begin demonstrating compliance with the proposal compliance criteria using the online AN webform. This form is completed with tips from the group's proposal coordinator. Once the first version is complete, the division administration checks the responses against the proposal compliance criteria before sending it on to the UCAR Budget Office for further review. The Budget Office often requests clarification and revision of the responses to the proposal compliance criteria based upon their understanding of the review process and past PACUR concerns.

The process then moves onto development of the formal proposal. In addition to writing the all-important scientific and technical portion of the proposal, this stage involves formalizing the budgets, statement of work and subawardee information as required. The process also involves gathering collaboration letters, both those required by the sponsor and those required by compliance criteria if no funding is going directly to university collaborators. At a minimum of fourteen days before the sponsor submission deadline, or fourteen days in advance of the date we need to have any official documents sent to the lead institution, the completed AN webform with supporting documentation must be submitted to the budget office. Due to the increased scrutiny of the criteria questions, review and editing often continues until the last few days before the submission deadline when all requirements are coming to a head.

The PI must complete their work on the proposal body three days prior to the submission deadline in order to allow the Budget office time to complete final reviews, including confirmation of compliance with all non-core submission criteria. The proposal is then submitted to the sponsoring agency.

If a proposal is selected for review by the PACUR subcommittee, the UCAR Budget Office assembles the completed AN webform and other supporting documents (cover page, budget, sponsor cover pages, collaboration letters, etc.) and makes this material accessible to the subcommittee. The PI may be called upon to answer any questions or concerns that the PACUR raises with the materials submitted.

Concerns and Issues

The UCAR Budget Office workload has been increasing as the numbers of non-core proposals requiring compliancy checks has increased. Extra effort on the part of NCAR PIs is also required to demonstrate compliancy. Both are negatively impacting NCAR's ability to carry out its scientific mission.

In response to these and other concerns, a broad review of UCAR management has been initiated by UCAR President Tom Bogdan. The Working Group #4 (WG#4) of the UCAR Management Committee (UMC) has been tasked to collect, study, and address issues related to "Administrative Efficiency & Agility" of the organization.

Particular concerns about the PACUR non-core proposal review process, especially the increasing workload related to complying with the proposal compliance criteria, which in part may be due to unclear expectations, personal interpretations, and limited communication, surfaced at the PACUR Townhall meeting on 6 June 2012.

Being receptive to the concerns raised and discussed at the PACUR Townhall meeting, this committee was established to follow up on these issues and investigate ways to streamline the PACUR non-core proposal review process.

Part C – Recommendations

The deliberations of the review committee resulted in a number of recommendations that are listed below. We distinguish recommendations focused on streamlining the proposal compliance review process (labeled “Rx”, where x is a simple numbering index) from those that are aimed at better educating the various stakeholders in this process (“Ex”) or suggested points for future consideration (“Fx”). These recommendations are not presented in any priority order.

R1 – Explanation of University Roles in 3a and 3b Proposals

Background

The AN system that tracks NCAR proposals includes a section where the PI has to address the four proposal compliance criteria. Criterion 3 “Collaboration Level” distinguishes four degrees of collaboration:

- a) Joint (e.g., separate proposal from UCAR and each university institution);
- b) Collaborative *with funding* to or from university partner;
- c) Collaborative *with no funding* to or from university partner; and
- d) No university collaboration.

The webform includes radio buttons for selection of the appropriate collaboration level and a textbox requiring further detailed explanations for the “Collaborative with No Funding” and “No University Collaboration” levels. Even though textbox explanations are not required for proposals that are “Joint” or “Collaborative with Funding”, PIs are requested to explain the roles of NCAR and all university participants within the abstract section of the webform. The UCAR Budget Office monitors 3a and 3b proposals closely, and they ask for further detailed information if the amount of money the university collaborator gets is less than 20% of the overall proposed dollar amount.

When “collaboration level” categories were established, it was agreed that category 3a and 3b proposals didn’t need additional documentation and the current version of the AN webform advises PIs of this fact. More recently, the non-core review committee has been requesting information about the roles of all partners be placed in the abstract portion of the AN form. This has led to confusion among the PIs when completing the compliance process.

When UCAR/NCAR is not the lead institution for a proposal there are frequent limitations on how much information is available to UCAR/NCAR regarding the level of collaboration, the distribution of the total budget, and the effort of other members of the

research team. In these situations, UCAR/NCAR is not in a hierarchical position to require that all members of the team provide collaboration letters, justify research efforts of other members, or make budgetary decisions that impact the larger research group.

Recommendation

In an attempt to streamline the AN process, and thus reduce workload, we argue that 3a and 3b proposals with financial support levels of 20% or more are intrinsically significant university collaborations that need no further explanations. If the support level is less than 20%, then additional information about the significant nature of the collaboration is required in the abstract portion of the AN. If NCAR is the lead institution, then the roles of each university partner should be concisely stated; however, if NCAR is not the lead institution then the supporting statement will be limited to describing NCAR's role.

Action

With the introduction of the new *Proposal and Award* (Panda) system and associated training, make it clear to UCAR administrators and PIs, and PACUR, that no further explanations are required for 3a and 3b proposals with 20% funding to the university collaborator beyond the simple radio button selection. If the funding level is less than 20%, further explanation regarding the significant nature of the collaboration shall be provided. Relevant language should be updated in PACUR and UCAR guidance documents within two months.

R2 – Fraction of Proposals Reviewed by PACUR

Background

Since 2000, only a subsample of all UCAR proposals is being reviewed for compliance by PACUR, where the subsample is selected (somewhat) randomly across UCAR Labs/Programs and collaboration type. Specific guidance on how large the subsample should be remains to be determined.

This recommendation aims to provide guidance on sample size. Such a measure will help limit the workload on both the PACUR subcommittee and UCAR Budget Office.

Recommendation

The selection of proposals for review is at the discretion of the PACUR subcommittee; however, proposals selected should encompass all types of collaboration level and be selected fairly randomly. Approximately 10-30% of all proposals subject to PACUR review shall be audited.

Action

PACUR and UCAR Budget Office personnel should discuss what fraction of proposals would be appropriate for review and add relevant language to their guidance documents. Thought should also be given to regularly revisiting this point down the road in order to monitor effectiveness and workload concerns and make appropriate adjustments.

In addition, PACUR and UCAR Budget Office personnel should take a close look at the packets that are provided for review and determine ways to streamline this process to the extent possible. This will be particularly helpful as the number of submitted UCAR non-core proposals may continue to grow.

R3 – Standard Responses

Background

Answering the four proposal compliance criteria in the web system is done using textboxes, where the PI or laboratory/division administrator has to fill in relevant explanations. In order to streamline the AN process and reduce associated workload, we would like to implement the use of standard responses (via appropriate checkboxes or pull-down menu selections) for Criterion 1 “Mission Appropriate”, Criterion 2 “Fair Facility Use”, and Criterion 4 “Co-sponsorship Level”.

Recommendation

Allow standard responses to the proposal compliance criterion 1 “Mission Appropriate”, Criterion 2 “Fair Facility Use”, and Criterion 4 “Co-sponsorship Level” to the extent possible.

A process shall be developed to determine how standard responses can be amended once the initial list has been established.

Action

UCAR Budget Office personnel has been monitoring responses for many years and has developed a shortlist of standard responses¹. PACUR and UCAR representatives shall review and select allowable standard responses for mission appropriate, fair facility use, and co-sponsoring questions. Further detailed explanations shall only be required if none of the standard responses can be selected (i.e., choose “other” and provide details). Update relevant language in PACUR and UCAR guidance documents within two months.

¹ See the attached document on Common Response for an initial set of standard responses.

R4 – Postdocs & Graduate Students

Background

Proposals that include support for a graduate student or postdoc are particularly welcome and encouraged, but such support is not currently a requirement for a university collaboration to qualify as significant and meaningful (non-compete Criterion 3). The argument here is that any non-core support sought from a funding agency or sponsor should be governed by the science needs and goals, not pre-determined required personnel types.

Recommendation

The recommendation is that the current encouragement but no requirement for graduate student/post-doc support be maintained.

Action

None required.

R5 – Science Team Proposals

Background

Various sponsors periodically solicit proposals toward forming a *Science Team* in support of a space mission or other major effort to address a problem defined by the sponsoring agency. An example of this may be NASA's "Living With a Star (LWS) – Targeted Research and Technology (TRT) Program".² Such calls for proposals are often coordinated across multiple agencies, and the outcome of PI selection isn't clear until after the proposal review panel has met and award decisions have been made.

Such science team proposals naturally include university collaboration, although no funding is exchanged between UCAR and a university partner. Funding will go directly to each selected science team member. Science team proposals have to be marked as 3c "Collaborative with no funding to or from university partner".

The recommendation below is geared toward establishing a standard response to the proposal compliance criterion 3c for this particular case. The link to the sponsor's call is included in the AN webform. No letters of collaboration should be required for science team proposals as long as the sponsor's call explicitly solicits contributions toward forming a science team.

² <http://lwstrt.gsfc.nasa.gov/>

Recommendation

Proposals responding to calls for the development of a multi-institution science team should be checked as 3c using an allowable standard response (e.g., select button or checkbox) and no letters of university collaboration should be required as long as the sponsoring agencies solicitation clearly identifies the development of a science team in the AN.

Action

This clarification should go into effect with the release of the new PandA system. Update relevant language in PACUR and UCAR guidance documents.

R6 – Community Model Development

Background

Enhancements of community models will inherently benefit the university research community, especially if these enhancements become openly accessible (e.g., included in a future WRF release).

Some, but not all, UCAR model development proposals include direct university involvement. Sometimes it may not be practical or financially feasible to directly involve university collaboration. Thus, such model development proposals should be marked as 3d “No university collaboration”.

Recommendation

Model development proposals should remain acceptable as 3d proposals without university collaboration. Explanation should be given about how the model enhancements will be beneficial and made accessible to the university research community.

Action

Update relevant language in PACUR and UCAR guidance documents as needed.

R7 – Proposal Dollar Amount Threshold for PACUR Review

Background

Since 1993 a subcommittee of the PACUR has been reviewing NCAR’s non-core proposals retrospectively for observance of the proposal compliance criteria. In 2000, it was decided to focus only on proposals of \$50,000 and larger, and this threshold was subsequently adjusted to \$100,000 in 2004.

Despite inflation, an increasing cost of doing business, and increasing workload on both the PACUR subcommittee and UCAR Budget Office personnel, this threshold has

remained the same since 2004. However, we determined that the expense of doing the equivalent work costing \$100,000 in 2004 would be about \$150,000 in today's world.³

The purpose of this recommendation is to bring the above threshold to a more current level and have it appropriately adjusted on a regular basis (e.g., every five years with NSF CA renewal). This should help to provide a mechanism for stabilizing the proposal review burden shouldered by both the PACUR subcommittee and UCAR Budget Office personnel.

Recommendation

Increase the proposal dollar threshold subject to a detailed review at the time of each renewal of the NSF Cooperative Agreement with UCAR. The adjustment needs to account for the increasing cost of doing business since the last review.

Action

It is suggested that the proposal dollar threshold be increased to \$150,000 effective in the next CA to account for the incurred cost of business increases since 2004. Relevant language should be added to PACUR and UCAR guidance documents.

R8 – UCP Proposal Review by PACUR

Background

In 1993, PACUR began reviewing NCAR's non-core proposals. UCAR Community Programs (UCP) non-core proposals were voluntarily added in 1995.⁴ It is important to recognize that UCP's mission is to support the UCAR community through projects that are focused on education, service, community building, and innovation. Moreover, none of UCP's funding comes through the NSF/NCAR CA (i.e., also no NSF base funding is available to UCP), and UCP does not have resources allowing it to contribute co-sponsorship, GAU usage (i.e., supercomputing time), or access to NCAR resources that are not already available to the broader university research community.

In June of 2012, the Presidents Council discussed the impact of including UCP proposals for PACUR review. They determined that it provides an unnecessary burden to the UCAR Budget Office, the PACUR subcommittee, and the UCP programs, and requested that UCP proposals be removed from review. This recommendation is an outcome of that Presidents Council request.

Recommendation

Subject to the approval by the PACUR as discussed below UCP proposals shall no longer be subject to PACUR retrospective compliance review.

³ See attached budgets for documentation of this increase.

⁴ <http://www.ucar.edu/governance/committees/urc/criteria.shtml>

Action

The subcommittee agreed that further information is required in order to make an informed decision regarding UCP participation in the PACUR retrospective compliance review. The UCP subcommittee members will make a presentation to the PACUR committee at the Spring 2013 meeting, providing an overview of the UCP programs and relaying how their activities support the broader educational community. This presentation will provide PACUR with a more in-depth understanding of how UCP operates so that it can make an informed decision regarding UCP participation in the non-core review process.

E1 – Education for UCAR PIs and Administrators

Background

The PACUR proposal review process adds notable workload and stress to UCAR employees engaged in the proposal process. At least part of the problem can be traced to personal interpretations and limited communication. Each layer of administration (e.g., NSF, PACUR, UCAR Budget Office, laboratory/division administrators) may contribute to the complexity that a UCAR PI may be faced with.

The review committee believes that there is an opportunity for broader education of PIs, managers, and administrators across UCAR about the proposal compliance criteria and proposal review process. For example, documents like the Advance Notice guidance⁵ should be widely known among the UCAR PIs and can help in achieving informative AN abstracts and proposal justifications. A common understanding and situational awareness among all participants (NSF, PACUR, UCAR, NCAR) may help alleviate much of the current stress and workload issues.

Recommendation

Use the rollout of the new PandA system to broadly educate UCAR administrators, managers, and PIs about the PACUR review process and how to address the proposal compliance criteria when completing the webform.

Action

As part of the new PandA system rollout and training, develop helpful resources for PIs, managers, and administrators to answer frequently asked questions and to provide good (maybe also include unacceptable) examples of AN abstracts, justifications, and collaboration letters, etc. Points that may need particular discussion and clarification relate to compliance “*by letter*” versus “*in spirit*”. In addition, responding to the proposal compliance criteria using the new PandA system should be assisted by meaningful online guidance (i.e., help text) within the system.

⁵ <https://ncar.ucar.edu/sites/default/files/users/cbook/Advance%20Notice%20Tips%2012-13-11.pdf>

E2 – Education for PACUR Proposal Review Committee Members

Background

The membership of the PACUR proposal review committee changes over time. Maintaining an appropriate level of “institutional memory” will be beneficial for making the semi-annual proposal review process as smooth as possible, as potentially avoidable ripple effects might be negatively felt throughout the organization.

The review committee felt that it would be good practice to keep records of questions and/or concerns that surfaced when reviewing UCAR non-core proposals and how they were settled to preserve that knowledge for future PACUR committee members and UCAR administrators as reference points. Another possibility for maintaining continuity in panel experience could be to rotate off no more than 1/3 of the PACUR proposal review committee membership in any year.

Recommendation

Develop a searchable database of past concerns or questions raised by the PACUR committee members when reviewing non-core proposals, including how these issues have been addressed, and make it easily accessible to PACUR members and UCAR administrators.

Action

Start collecting past and new PACUR questions or concerns and information regarding how they were settled. Discuss options for effective ways to create a searchable database, and then get it developed.

F1 – Process for Review of PACUR Requirements

Background

Over the years the PACUR requirements and criteria have evolved. Similarly, guidance on how to address these criteria has matured as questions and concerns have been raised along the way.

It hasn't been clear to the review committee, however, how modifications of the proposal compliance criteria or interpretations thereof have been facilitated in the past, and whether there was a formal process involved or changes have been accommodated more in an ad-hoc fashion.

Recommendation

The proposal compliance criteria and interpretations, internal controls and audit information thereof shall be reviewed as part of the NCAR Cooperative Agreement

renewal process. Amendments to the criteria need to be agreed upon by NSF, PACUR, and UCAR representatives.

Action

Update relevant language in PACUR and UCAR guidance documents accordingly.