INTRODUCTION

This Faculty Guide to Sponsored Programs gives a brief look at the University practices affecting the solicitation of grant and contract funds. It is not intended to be an official statement of University policy or a comprehensive manual, but a readily accessible guide to get Penn State faculty started in the pursuit of sponsored support.

Sponsored support can take many forms. There are government agencies, private industries and private foundations that as part of their mission support research in a wide variety of areas. Most government agencies and private foundations award grants, while private industries award grants, contracts and agreements. A grant typically allows the researcher the widest flexibility in the performance of the research and requires a minimum of reporting responsibility. Contractual agreements may be more narrowly defined and restrictive in the performance of the research and the reporting structure. Many government agencies and foundations provide detailed guideline packages and information concerning the grant application process. Industry sources may be more nebulous in their application process. The Office of Sponsored Programs can assist faculty in obtaining funding source information and guideline packages, and can also assist in proposal preparation and submission.

SPONSORED PROGRAMS ADMINISTRATION AND POLICIES

Sponsored Programs Administration Network

The Office of Sponsored Programs (OSP) is established to assist faculty in obtaining external funding to support their creative and scholarly activities. As such, OSP plays a role in helping the University fulfill its research, instruction, and public service missions.

Sponsored programs administration at Penn State is a partnership forged between the faculty member and university administrators. Department, college and IRP administrators, the Office of Sponsored Programs, and Research Accounting form a network (the Sponsored Programs Administrative Network or SPA Network) of administrative personnel who can provide a spectrum of support services to the faculty researcher or project director.

Responsibilities

Penn State is deeply committed to academic freedom, not only for the sake of the faculty, but for those we serve as well. Ultimately, academic freedom is crucial to our society, for it affords the individual faculty member the opportunity to remain uncommitted to a particular course of action or end result, thus ensuring accurate, objective and unbiased results.

The Office of Sponsored Programs has a primary responsibility to ensure that grant and contract agreements protect our institution's integrity and each faculty member's academic freedom. The SPA Network endeavors to work closely with faculty members to preserve and protect that freedom.

The SPA Network also has a principal responsibility to the institution to protect it from unnecessary risks and liabilities and to ensure the proper stewardship of sponsored funds. This responsibility necessitates the creation of appropriate mechanisms for the accountability of sponsored funds. It also requires compliance with certain public policies, the filing of assurances and certifications regarding regulatory compliance, and the complete disclosure of potential conflicts of interest. All those involved in the conduct and management of sponsored programs must abide by these mechanisms and policies.

The Principal Investigator

Two terms, principal investigator and project director, often are used interchangeably by sponsors, contract negotiators, proposal reviewers, research administrators, and others. The terms are used synonymously herein, with preference given to the term principal investigator and its acronym PI.

In those cases in which more than one individual is considered to be primarily responsible for the scientific, technical, and administrative conduct of a project, each person shall be considered a co-principal investigator. Each co-principal investigator must meet the same eligibility requirements as those set forth for principal investigator. It should be noted that many extramural funding agencies recognize only one principal investigator. In addition, it is important for efficient and effective communication both within and outside the University to have one person designated as the "project correspondent."

Thus, in those cases in which more than one faculty member is listed in the proposal as co-principal investigator, one should be designated *primus inter pares* (first among equals). This person should be named first in any listing in the proposal and should be identified on university forms as the Investigator/Project Correspondent.

Each project must have a designated leader (PI) who will see that the terms of the grant or contract are fulfilled. University policy requires that the PI be a full-time appointee and paid on a University payroll.[1] Faculty with emeritus status may participate in sponsored projects with special consideration. Further information can be obtained from the Office of Sponsored Programs.

PI Responsibilities

Although the University is legally responsible to the sponsor as the actual recipient of a grant or contract, the PI is held accountable for the proper fiscal management and conduct of the project.

To assist faculty in this responsibility, the University provides supporting administrative services and has established procedures to help meet both sponsor and university administrative requirements. The University is, ultimately, legally and financially responsible and accountable to the sponsor for the performance of the activity funded and the proper use of funds, but without the full cooperation and vigilance of the PI, the University would fail its stewardship role. In the truest sense, therefore, the sponsored programs process is a joint effort between the PI and the University; both must do their part well in order to achieve success.

[1] Fixed term and other non-regular faculty/staff may serve as PI's on an exceptional basis. In such instances, University policy requires: (1) that the individual must be qualified for and willing to carry out the duties of principal investigator; (2) that this appointee is familiar with these duties and has been given a statement of them; (3) that a faculty member on a standing (continuing) appointment is qualified to assume responsibility for this project and will do so, in the event that the fixed term faculty member is unable to complete the work called for in the proposal. A policy adopted by ACOR requires that this arrangement be approved by the dean or, if it is an IRP unit, by the director. This approval is granted when the appropriate administrator signs the Internal Approval Form (IAF) at the time the proposal is submitted or the award or transfer of a grant/contract is processed. The fixed-term appointee is the principal investigator and thus is fully responsible for the project. The standing faculty member who is serving as the "administrative PI," only becomes involved if the fixed-term faculty member is unable to complete the project (including the submission of final reports/deliverables). Deans/directors may also have the "administrative PI" serve as a "mentor" when the project PI is at the post-doctoral level.

The PI must comply with all the terms and conditions of a sponsor's award and see that project funds are managed efficiently and effectively within approved budgets. The PI must also ensure that the project is completed in a diligent and professional manner.

Projects are conducted as a department, college, IRP, or campus function. If the project is overexpended or if auditors disallow an unauthorized expenditure, the University must ask the appropriate academic unit to cover this cost.

The PI is therefore responsible to the sponsor, unit, and the University for ensuring that the requirements of the award are met and the policies of the University are followed.

Freedom to Publish

Freedom to publish is essential to the fulfillment of the University's responsibility to disseminate the findings of research. The University therefore works with the faculty member to preserve this right in sponsored agreements.

In certain circumstances, the University may restrict or delay publication. For instance, because technology transfer is a form of disseminating the results of research for the public good, the University may choose to accept delays in publication when such delays are necessary in order to seek patent protection.

In addition, publications involving patents may limit discussion to statements of new discoveries and interpretations of scientific facts and need not reveal specific information of processes or methods that are proprietary in nature.

Papers describing discoveries often are withheld pending additional confirmations believed to be essential. Faculty also have refrained from releasing information where general knowledge might lead to nonproductive speculation and exploitation.

Finally, in those exceptional cases in which researchers are involved in government-classified research, publications are subject to the restrictions imposed by the government.

Intellectual Property

The University retains ownership to intellectual property developed by University faculty on research projects. The University recognizes, however, the importance of transferring that technology to the commercial sector where it can benefit the people it serves. Therefore, the University usually grants sponsors a first option to negotiate a license for technologies developed under the project. For a more detailed explanation, see "Intellectual Property, Technology Transfer and Entrepreneurial Activity Policy and Procedures," available from the Office of Sponsored Programs.

Organization for Research

The academic department is the traditional home for instruction and discipline-oriented research. Another base of research is the intracollege unit formed of faculty and students from departments within a college--for example, a research center. These centers or laboratories are administered by a director, a department head, or a dean. They serve to identify an organized research team to facilitate the preparation of proposals and research reports, and to encourage faculty cooperation between departments.

Research activity within a college, whether it is departmental or intracollege, is the responsibility of the dean, who assigns allocated funds and approves the hiring of research personnel paid from college budgets.

The third organizational base for research is the Intercollege Research Programs (IRP). These include units such as the Materials Research Laboratory, the Pennsylvania Transportation Institute, and the Environmental Resources Research Institute.

Many faculty involved in IRP units hold joint appointments with a department. Administration of the IRPs is provided by unit directors and by the Director of Intercollege Research Programs, who reports to the Vice President for Research.

Research Administration

The Vice President for Research has overall responsibility for the University's research program.

Reporting to the Vice President is the director of Sponsored Programs, who provides leadership to Penn State’s extramural relations in connection with the sponsored support of University research, instruction, and service programs. The Associate Vice President for Research and Technology Transfer, who also reports to the Vice President for Research provides leadership to Penn State's extramural relations in connection with the University's research, economic development, and technology transfer missions. Units reporting to this office, which are of interest to those seeking sponsored support, are:

- Industrial Research Office
- Intellectual Property Office
- Ben Franklin Technology Center

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PROPOSAL DEVELOPMENT

Editor's Note: *There are many references available describing the proposal development process. One of the most informative guides is one that was developed for the American Association of State Colleges and Universities. It was prepared by Dean Kleinert and Libby Costello of the Office of Federal Programs. We are reprinting portions of their "Proposal Development Handbook" in this guide, with permission.*

No instruction on proposal development can prepare one for every circumstance. A generic guide to proposal development is not going to address details on describing the scientific methodology needed to perform a specific experiment. However, this information often is available in the application kits for specific agencies. For example, the National Institutes of Health application kit, PHS-398, has a complete description of each section of the proposal, spelling out precisely what the agency needs to know about a project and investigator.

The Rationale for Grant Making

Government agencies and private foundations have long recognized the value of using academic talent to assist them in meeting their goals. Grants from both sources have supported a wide variety of activities aimed at goals as diverse as expanding scientific knowledge, promoting social equality, and fostering economic development. Although it sometimes appears that virtually any activity can be supported, in fact, sponsors fund projects that fit within specified missions. Government agencies disburse tax dollars to meet public needs that have been recognized by congress or state legislatures. In many cases, the authority to spend is very broad, but in all cases, an agency can fund only activities that fit within its authority.

Foundation grant making may appear more idiosyncratic, but it is not without its own inherent logic. While foundations do have much greater discretion in disbursing their funds, they must operate within the boundaries established by the Internal Revenue Service to maintain their tax-exempt status. They have demonstrated a strong concern for public approval and a sincere wish to see their money well spent.

Both types of funding sources want to fund projects that hold promise of making a contribution in the area(s) for which they feel responsibility. Consequently, whether you are applying to a government program or a foundation, it is important to propose a clearly thought-out project with measurable outcomes in the area of identified need.

Putting Your Idea in a Project Format

Sponsors fund activities, not ideas. No matter how good your ideas or noble your intentions, you must translate them into a specific set of activities in order to get funding. Potential sponsors must know what you actually plan to do in order to determine whether investing in your project represents an effective use of their resources. Whether you want to set up a training program, demonstrate a novel approach to service delivery, or conduct basic research, the task of moving from an idea to a practical work plan is the same. You must define the problem or need you wish to address, formulate goals and objectives for your response to that problem, and then decide what specific actions have to be taken to fulfill those goals and objectives.

A good way to do this is to develop a concise outline containing each of the elements listed below. As you do so, keep working on each section until you have established a strong, logical connection between the activities you propose to undertake and the resolution of the problem you have defined. Developing the outline should allow you not only to organize your thoughts into a coherent plan of action, but also to muster the arguments you will need to persuade a potential sponsor of the value of your proposed activities. As you work on each section, try to look at the project from the perspective of a potential donor. Why would someone support this activity? Who might benefit from it, or what might be accomplished because of this work?

Developing a Project Outline

Statement of Need or Problem to be Addressed

What really needs to be done? What significant need(s) are you trying to meet? What services need to be delivered to whom, or what gaps exist in the knowledge base of your field? Thinking critically about these questions will allow you to "carve out" a workspace for yourself by defining the problem you want to address. Remember the problem must be both significant and manageable. Potential sponsors must be convinced not only that a problem is important enough to deserve attention but also that some impact on the problem is possible.

Goals and Objectives

Set out an overall goal for your project by delineating what you actually intend to accomplish. Think about what impact you hope to make on the problem. What caused the problem, or what factors contribute to it, and how can these factors be modified to alleviate the problem? What specific measurable changes could be made? Your answer will allow you to develop a set of project objectives **--** i.e., a statement of precise outcomes that can be measured to determine actual accomplishments.

Plan of Action, Project Design, or Methodology

What specific activities would enable you to meet the objectives you have set? How can they be conducted? For a research proposal, you must select an appropriate methodology and then establish a clear rationale for its adoption. For a service or demonstration project, think about the number and types of people who would be served and who would provide the specific service components.

Budget and Personnel Requirements

Estimate the personnel requirements of the project. How many people with what types of qualifications would be needed to carry out the project? What space, equipment, and travel resources would they need? How much time is necessary to complete the project activities? Once you have answered these questions, you should be able to assess the dollar value of each of the items mentioned to get a fairly accurate estimate of the financial requirement of the project. [In all cases remember to include the University’s Facility & Administration Costs (also called “indirect” or “overhead” costs). Your College/Unit research office can assist you in the development of budgets!]

Title

When you have finished outlining the project chose a simple title that explains (to the extent possible) what you plan to do.

After you have thought out each of these elements, review what you have prepared in order to be sure that the overall plan is logical and consistent. It should now be relatively easy to write a brief outline of the project, which can be used as the basis for the next step in the development of a proposal. The outline should include:

- title of the proposed project
- statement of need or problem to be addressed
- plan of action, project design, or methodology

- budget and personnel requirements

Reassessing Your Position
Before you proceed (or begin) to identify potential sponsors, take time for two additional steps. First, conduct a thorough bibliographic search, not only to avoid duplication of existing studies or activities, but also to uncover information that may strengthen your proposal. Second, evaluate your qualification in relation to the requirements of the project. Be realistic in assessing whether you have the necessary experience, interest, and ability not only to carry out the project but also to compete for funding. It is equally important to assess how the project fits with your institution's mission, size, and resources. Grants generally are made to institutions, not individuals; in many cases, sponsors require evidence of institutional commitment before they will consider supporting a project, however impressive an individual's proposal may be.

IDENTIFYING POTENTIAL SPONSORS

Having defined your project plan and estimated the financial resources needed, you should next identify particular sponsors who might have an interest in your work. Although it is possible to do this on your own, you can obtain assistance from the Grants Information Service of the Office of Sponsored Programs.

Grants Information Service
The Grants Information Service (GIS) provides sponsor information to Penn State faculty and staff to support their activities in seeking funding for research, instruction, and service projects. Funding information is available to Penn State faculty through **OSPWeb** at:

http://www.rtto.psu.edu/gis/

OSPWeb provides links to information from sources like the Federal Register, Commerce Business Daily, NIH Guide for Grants & Contracts, the NSF Bulletin, and the Catalog of Federal Domestic Assistance. In addition, GIS utilizes a number of other electronic databases of funding information, including:

- **Office of Federal Programs** – OSPWeb provides a link to the Office of Federal Programs (OFP) in Washington, D.C., which on a membership basis provides Penn State with a continuous monitoring of funding opportunities from Federal, State, and private agencies, by both publishing and broadcasting OFP Reports, Deadlines, Special Reports, and Bulletins. All these services are available to Penn State faculty and staff who are operating within the .psu-domain.

- **SPIN – The Sponsored Programs Information Network** – This is a commercial service available by subscription for all Penn State faculty and staff who are resident on the .psu domain. The service provides not only access to funding opportunities search data but also a proactive faculty interest matching system. This system, called SMARTS, allows faculty to enter their research interest keywords. It then checks overnight for any new opportunity listings that match the faculty interests and sends out emails about the new opportunities. SPIN can be accessed through a link on OSPWeb.

- **Community of Science (COS)** – The COS database also has a funding opportunities search program and a proactive faculty matching system [to be available by fall 1997]. Penn State pays the annual subscription for this service, which allows all .psu-domain users access. The web site can be accessed through OSPWeb.

- **The Federal Information Exchange (FEDIX)** – FEDIX provides a single source of funding opportunity notices from a number of federal agencies. FEDIX information is available for free and can be accessed through OSPWeb. The FEDIX Opportunity Alert system is a proactive faculty matching system to which faculty can subscribe in order to receive automated opportunity matches via email. The web site can be accessed through OSPWeb.

- **GrantsWeb** – This service is provided free of charge from the Society of Research Administrators. It provides direct links to most federal granting agencies and also provides a directory of web sites for foundations and other private philanthropic agencies. The site is also noted for links to a host of research administration tools, including federal regulations such as the A-21, A-110, and the Federal Acquisition Regulations. The web site can be accessed through OSPWeb.

Ascertaining Sponsor Interest

Once you have identified potential sponsors, it is important to obtain as much information as possible in order to ascertain their likely interest in your project. The information needed can usually be found in printed materials readily available to the public, since government agencies are subject to strong reporting requirements, and foundations are required by law to make information on their giving practices available to the Internal Revenue Service and the public. Pay particular attention to the following factors:

- the purpose of the program
- stated program priorities
- recipient eligibility requirements (including geographic restrictions)
- types of activities eligible for funding
- particular funding mechanism (grant, contract, etc.)
- budget restrictions and/or matching/cost-sharing requirements
- level of competition (total funds available and, where known, projected number of awards and range)
- availability of application forms or specific proposal guidelines
- application deadlines and review cycles
- giving history (types of organizations and activities funded in the past)

Agency Contact

If the information you have obtained leads you to think that a program is relevant, it is, in most cases, appropriate and advisable to contact agency staff to verify the accuracy of your reading of their materials and to ascertain the current status of the program (funding levels, deadlines for applications, any change in program priorities).

It should be noted, however, that contact with some foundations might be restricted. Prior to contacting private funding sources, faculty must first contact their college research office. Once this is done, the Office of Sponsored Programs can help you use agency directories and other materials to locate the appropriate contact person. Frequently this information can be accessed through electronic directories on federal agency web pages.

Contact with a potential sponsor can be made by a telephone conversation, a written inquiry describing your project, an office visit, or a combination of these approaches. The method of contact you choose should depend on the sponsor's preference, if indicated, and your own style. If a letter of intent is submitted, it should be concise, usually no more than one or two pages, but should include all the information contained in your outline.

You should not expect a commitment for funding at this point, but you should be able to obtain an indication of the relevance of your work to the sponsor's current interests. The sponsor's reaction to your preliminary inquiry will allow you to assess whether it is worth your time and effort to proceed with the development of a full proposal.

PREPARING A FULL PROPOSAL

There is no secret formula guaranteed to produce a perfect proposal. You can prepare a more effective document, however, if you keep certain general principles in mind.

First, the proposal document is the primary basis for evaluating your project and for determining whether financial support is justified. You must be sure it not only represents the need for action, but also includes all the information needed to evaluate accurately the proposed activity and your ability to conduct it.

Second, your document is likely to be read by people facing time constraints. Reviewers often read large numbers of similar proposals in a relatively short meeting. A well-organized and concise proposal will receive favorable consideration.

Before embarking on the writing process make yourself aware of the proposal preparation services that may be available in your college. A call to your research office may save you some valuable time.

Elements of a Full Proposal

The format or presentation of a particular proposal document will depend on the requirements of the sponsor to whom you are applying: most government agencies have application forms or very specific proposal guidelines, while other sponsors often are less directive. There are, however, certain elements that all proposals should contain. These are outlined briefly below, but more detailed discussions of each can be found in some of the reference works listed in the bibliography.

Narrative

The main body of the proposal should be a narrative laying out exactly what you plan to do and why. It should include all of the elements in your outline, with supporting information and elaboration.

Generally, you begin with a statement of the need or problem you will address. It is important that you make no unsupported assumptions. For service projects, you should document the need through a needs assessment. In the case of research projects, you should provide a rationale for the need of your project and the impact of projected results.

Next, state the overall goals and specific objectives of the project, making sure there is a clear, logical connection between the problem you have defined and the response you are proposing.

Finally, describe your plan of action or methodology, providing sufficient detail for the reader to judge whether your project can be run both efficiently and effectively. The narrative should demonstrate that you have thought out all aspects of the project carefully. It must convince the reviewer of the significance of the problem, the appropriateness of your proposed response, and your ability to conduct the proposed activities. Be sure its logic is cogent and its organization strong.

Evaluation

Effective program evaluation has become more crucial as the funding available for research programs had diminished in terms of real dollars. Increasingly effective evaluation methodologies have evolved in recent years, and most sponsors recognize that the incorporation of an evaluation component in project management plans leads to more effective project operations as well as better results (project outcomes).

Many sponsors will specifically request a separate description of your planned evaluation process. In other cases, you should be sure to address this element in the narrative or as a separate section of the proposal. Many publications on evaluation are available to help you select the most appropriate methodology for your particular project.

Budget

Although too often viewed as a tedious technicality of interest only to accountants, the budget, in fact, is a key element of any proposal. It outlines your project in fiscal terms and is often used by reviewers to get a quick sense of how the project would be organized.

The major budget item frequently is salaries. This should be broken down to indicate the number of professional and support staff, and the percentages of time to be spent on the project. Other typical budget items include laboratory supplies, travel, equipment, fringe benefits and institutional overhead. If your academic unit will be providing partial support for the project, the budget should reflect this fact.

Proposal solicitations in some instances call for institutional cost sharing as a condition for an award. While the University is firmly committed to assisting faculty in the pursuit of outside funding for research initiatives and program development, the resources available for cost sharing are limited. All cost sharing must be approved by an appropriate institutional official who administers the source of funds providing the cost sharing. All cost sharing must be documented in accordance with University and sponsoring agency policy.

Requests for institutional cost sharing through the use of indirect costs must be submitted in writing to OSP. Such requests shall identify the amount of institutional cost sharing proposed, the amount of cost sharing the academic units involved are providing, and the rationale and justification for utilizing indirect costs for cost sharing or for waiving indirect costs.

Accurate estimates of all your expected costs are important. Reviewers know the cost of doing work in their field, and figures that are either too high or too low may cause them to question your familiarity with the field and your abilities as a project administrator. Your college research administrator can help you compile realistic budget figures and should be consulted as you develop this section of the proposal.

Abstract

Prepare a brief abstract of the proposal, keeping in mind that reviewers may rely on it heavily in evaluating the proposed project. Be sure to cover all the key elements in the proposal but also to conform to any length limitations imposed by the sponsor. Although this section will appear first in the final document, it is best written after the main sections of the proposal have been completed.

Appendices

Any materials (such as charts, graphs, tables, or illustrations) that add important data but would impede a smooth reading of the narrative should be included as appendices. Concise vitae of project participants should also be included as appendices. Remember, however, that the sponsor is interested in relevant work and experience, not in everything that an individual has done.

General Considerations

As you write the full proposal, keep the following points in mind.

First, follow sponsor guidelines. By filling out forms incorrectly or failing to supply requested information, you may prejudice a potential sponsor against your project.

Second, address stated criteria. If points are assigned to the various sections of a proposal (as program guidelines will indicate,) one weak section may omit the chances of an otherwise strong proposal.

Third, use clear, precise language aimed at your specific audience; avoid jargon or unnecessarily technical terminology. It is often helpful in writing the proposal to be familiar with the review procedures used by the particular sponsor, i.e., whether reviewers are informed laypersons or peers in a particular field.

Once the proposal has been completed, two additional steps need to be taken. Agency staff and foundation personnel commonly recommend that applicants have their proposals read by colleagues for strength of logic and clarity of expression.

This often-neglected step can be very important in the proposal development process, as your colleagues' comments can help produce a stronger proposal.

The proposal must then be reviewed by your research administrator and OSP for internal clearance and final approval. *Remember to allow enough time to secure all necessary approvals and signatures before the application deadline.*

PROPOSAL SUBMISSION

The British neurochemist, Steven Rose, describes the process of submitting and managing sponsored projects as akin to "running a small business." The analogy is apt because successful Project Directors, like entrepreneurs, engage in thoughtful resource and program planning *well in advance* of the submission of a proposal. Within any complex organizational setting, the process works best if it begins early. This is especially so when important decisions need to be made regarding space, personnel, and other resources needed to make the envisioned enterprise (the funded proposal) successful. Several individuals may need to participate in such resource discussions.

Early contact and communication with the appropriate department chair, research dean, College or Unit research office, and OSP are the simplest and most effective ways to obtain institutional commitment to support and facilitate sponsored programs. Taking the business analogy one step further, consider the sponsor as an investor: potential sponsors view positively a researcher's ability to garner support for his or her program at the institution. To sponsors, this conveys a measure of the individual's leadership ability, and hence, an indicator of the project's chances of success.

It is the practice of the SPA-Network to make every effort to send out proposals in time to meet sponsor submission deadlines. However, proposals cannot be submitted until they are reviewed to make sure that they are in proper form.

In order to facilitate its administrative review, the University uses a review sheet, called the Clearance Data Form (CDF). Your research administrator normally prepares the CDF. The form summarizes key administrative and fiscal information about the project. This includes:

- reviewing the CDF to make sure that the proper approvals and signatures have been obtained;
- ensuring compliance with University regulations/policies (e.g., conflict of interest, consulting, etc.);
- ensuring compliance with all relevant state and federal research regulations (e.g., human subjects, animal welfare, etc.);
- checking the budget for accuracy of computation, salary information, fringe benefits, and indirect costs;
- ensuring that any University commitments have received the proper approval;
- for most Request for Proposals (containing contractual and regulatory clauses), ensuring that the necessary review by OSP has taken place;
- ensuring that all sponsor requirements have been met;
- ensuring that the required number of copies are being supplied, including a copy for OSP and
- ensuring that all necessary forms have been filled out appropriately.

Although some errors in a proposal can be corrected after it has been submitted, other errors could result in very serious financial and legal consequences to the University. Therefore, the University cannot submit a proposal until all of the above items have been satisfactorily addressed.

Once the necessary review has taken place, the proposal must be prepared for final mailing. This includes:

- obtaining the necessary signatures for the cover page,
- preparing a cover letter,
- boxing the proposal, and

- mailing the proposal or transmitting it electronically in sufficient time to reach the sponsor by the deadline.

The proper preparation, review, and processing of proposals takes considerable time and staff effort. Depending on the complexity of the proposal, several days may be necessary to complete the review process. This is true even for proposals submitted electronically via such new mechanisms as the National Science Foundation's *FastLane* system. In order to be sure that proposals can be submitted in time, it is extremely important that completed proposals be delivered for final review at least five (5) days prior to the sponsor deadline.

AWARD PROCESS

Once agency personnel receive your proposal, they begin a meticulous review process that most often includes a thorough analysis of your proposed project by your peers. The evaluations they receive from the peer review process are usually submitted with recommendations from the program office to an awards council for final action. In some cases, the program office or the council may call for additional review and a site visit, especially if the project is major in scope and involves several disciplines.

After the proposal has been reviewed at the agency and recommended for funding, it is not unusual for a contracts or grants officer of the agency to contact OSP and "negotiate" the award. The "negotiations" usually deal with budgetary items, which may include verification of salaries, travel, equipment, materials and supplies, subcontracts, and confirmation of fringe benefits, tuition, and indirect cost rates.

Advance Fund Numbers

Advance fund numbers are requested only when the unit receives informal notification of award or believes there is a definite likelihood of funding based upon other information. The advance fund number allows the unit to set up a restricted budget and begin incurring expenses as of the proposed effective date of the award.

Under the expanded authorities granted by some agencies, pre-award expenditures are allowed if prior approval is obtained through the Project Modification Request (PMR) system.

However, it should be noted that if the award does not materialize, or the effective date is other than stated on the request, the risk for unallowable expenses falls entirely upon the unit.

Receipt of Award

Awards are transmitted by the sponsor to the OSP. If the document is sent to the principal investigator, it should be forwarded immediately to OSP through your unit research office.

The University requires that all sponsored program awards be processed by OSP. OSP also provides final recommendations for acceptance of bilateral agreements, which are then executed by an authorized official. This is administratively handled by OSP.

Award Pre-Review Process

When awards are received in the OSP they are assigned to a negotiator. The negotiator first provides a preliminary review of non-standard award documents and accompanying terms and conditions. The pre-review highlights possible problem areas that impose risk upon the University. (Pre-review is not necessary for most unilateral awards, e.g., NIH, NSF.)

Pre-review information is sent with attached documentation to the appropriate research administrator in the unit. Unit approval and recommendations for any changes are returned to OSP.

At the same time the award is being reviewed in the unit, it may be sent to Research Accounting for review of unusual financial provisions or to Risk Management if there are liability concerns.

Award Negotiation

After receiving unit and the principal investigator's recommendations, the contract negotiator in OSP next contacts the agency's contracting officer to negotiate any necessary changes to the award document. These negotiations may involve the research administrator in the unit, the principal investigator, or even the dean or IRP director. Research Accounting, Risk Management, legal counsel, or the Intellectual Property Office may also be called upon as needed during negotiations.

The contract negotiator's principal points of contact within the University are the research administrators in the units. The negotiator attempts to keep the research administrator informed at all times as to the status of negotiations through a special "contract status" web site. The research administrator in turn keeps other administrators within the unit informed (i.e. PI/dean/director, chair, etc,).

An authorized representative of the University must negotiate the business and legal terms of any award. The PI is not authorized to negotiate. PIs may, and in many instances should, participate in discussions with the agency, but only on programmatic, noncontractual issues. In doing so, however, they should be sure to advise the agency that they are not permitted to make commitments on behalf of the University. A report of any discussions preliminary to official negotiation should be given immediately to OSP to prevent any miscommunications with the agency.

It is the contract negotiator's job to review the award document and to negotiate on behalf of the University assuring that the terms and conditions are favorable to an institution of higher education and protect the University and its faculty from needless risks or commitments.

Once negotiations are completed and the award is fully executed, OSP sends the contract file to Research Accounting, and a University restricted budget is established for the project.

FINAL THOUGHTS

Your long-term effectiveness in securing external funding can be improved in a number of ways. Consider the following:

- Be creative in exploring the applications of your work. Utilize the OSPWeb and Grants Information Service to identify potential funding opportunities.
- Become thoroughly familiar with the agencies that are apt to support your work. While the overall structures of federal and state governments may appear hopelessly complex, in all likelihood only a few agency subunits will offer significant support for any one field of activity. Zero in on those relevant to your interests. Get on their mailing lists for annual reports and other information. If they have advisory groups, monitor their deliberations.
- Review other work supported by potential sponsors. Look over copies of final project reports and previously funded proposals to see whether there are particular characteristics common to many of the projects funded in the past.
- Get advice from your research dean and those Penn State researchers who have been successful in obtaining awards from the target sponsor.
- Explore the possibility of establishing relationships other than that of grantor-grantee. Are there opportunities to serve summer residencies or sabbatical internships? Are there any services you could provide to agencies that might have a long-term interest in your work?

In all, the best advice we can give is not to wait until you desperately need grant support to begin using the resources readily available to you. Let the professionals in your unit research office and in OSP know your interests and concerns and find out how they can assist you.