

## A primer on developing a budget for your project

### **What is a budget?**

A budget is an estimate of cost elements necessary to perform tasks set forth in the project plan. A budget should show the direct correlation between the cost and the work to be done. All costs included should be allocable, allowable, and reasonable under the applicable cost principles (check ORS policies and procedures).

### **Direct Cost vs. Indirect Cost**

#### **Direct Cost**

Costs that are directly attributable to the operations of the program.

#### **Indirect Cost**

Costs that are not directly attributable to the operations of a program. These costs are cost incurred for common/joint objectives of an organization and therefore can't be readily identified to a particular project. Examples include utilities, administrative support, University provided lab space, general office supplies, etc. For budgetary purposes indirect costs (also referred to as overhead) is classified as Facilities & Administrative Cost, or F&A for short.

### **Components of a budget**

#### **Direct Costs**

##### **Personnel costs**

- When asking for support, begin with the current institutional salary for the budget period.
- Be sure to estimate appropriate pay raises when projecting forward on a multiyear budget.
- Be aware of any caps that may be imposed by the funding agency (Le. NIH salary cap, NSF limitation on the number of months of summer overload.)
- Use realistic fringe benefit rates.
- Be sure to properly classify types of employees (Le. stipend recipients are not employees therefore do not receive salary and are not subject to fringe benefits).

##### **Equipment**

- Be aware of dollar thresholds for classifying items as equipment. In general it is defined as tangible personal property valued at \$5000, and with a useful life greater than one year, however at times some funding agencies may classify equipment as tangible goods with a useful life of greater than one year and valued at \$1000 or more.
- Exempt from F&A.

##### **Travel**

- Should estimate all relevant costs required such as airfare, registration/conference fees, ground transportation, per diem.
- Proposed travel should be relevant and provide a benefit to the project.

##### **Other Direct Costs:**

##### **Materials and Supplies**

- Generally should only include scientific materials and supplies. Anything that can be considered as administrative in nature or generic in purpose should not be charged to a

federally funded contract or grant. (Note that exceptions do exist depending on the nature of the award)

### **Sub-Awards/Sub-Contracts**

- An agreement is considered a sub-award or a sub-contract when a portion of the science is transferred to another entity (University, Private institution, other Governmental entity, etc.). It's important to make the distinction up front because only the first \$25K of a subcontract is subject to F&A. Procurement from a vendor is not considered a subcontract.

### **Other**

- Post Doc Trainees (not considered employees) - budget narrative should provide detail as to the training the Post-Doc will receive. Exempt from F&A.
- Specialized Service Facilities such as computer usage cost (RCF) or ship operations. Exempt from F&A.
- Communications costs.
- Rents. May be exempt from F&A.
- Anything else that doesn't fall into another category.

### **Indirect Costs**

#### **F&ACosts**

- Be sure to always use the appropriate negotiated F&A rate for your institution.
- Modified Total Direct Cost (MTDC) is the most common base used for calculating/assessing F&A costs.  $MTDC = \text{Total Direct Cost} - \text{exclusions}$ . Exclusions include: Equipment, Stipends, Scholarships and Fellowships, Tuition Remission, Patient Care, Construction, Subcontracts > \$25K, Specialized Service Facilities, Lease Rentals.
- Make every effort to recover full F&A costs-avoid waivers. F&A costs support your research (Facilities & Administration). These are real cost borne by your institution and is NOT a profit mechanism to get more money from your sponsor.

### **Budget Narrative/Justification**

This is an important component of the budget process because it's the section where you would add specific information relating to the requested funding. This is where you should explain the basis for all included costs and make no assumptions. A thorough, well thought out budget justification can demonstrate your understanding of the project needs and your ability to complete the project successfully. Your narrative should address necessity, reasonableness, and allocability of all proposed costs.

The budget narrative should explain/justify:

- Types and numbers of personnel (per person hours related to the tasks in the project plan).
- The salary/wage rates (what they're based upon, e.g. current payroll).
- Fringe benefits (how much and how applied).
- Cost of living increases (why needed during project period and calculation method, e.g. union bargaining unit negotiated contracts).
- Overtime (requires justification and agency approval).
- Travel (indicate each trip, its justification, and the basis for pricing the trip, e.g. airfare, per diem, ground transportation, conference fees, etc.)
- Consultants (who they are, why required, their daily rate).
- Computers (justify need as related to grant, explain why leased or purchased).

- Other equipment (justify need, explain if it's to be purchased, leased, or obtained from existing inventory).
- Supplies (what kind, how much, how priced).
- Publication costs (basis for estimate, per page cost).
- F&A (what is it based on, rate applied, or authorization of waiver if applicable).

Cost sharing or matching is the portion of the costs of a project or program that is not borne by the sponsoring agency or the Federal government. There are two types of cost sharing—mandatory and voluntary. If the proposal announcement does not require cost sharing, depending on your institution, it may be recommendable to not include quantifiable cost sharing because once a proposal with voluntary cost sharing is awarded; the cost sharing becomes mandatory committed cost sharing.

To avoid committing to voluntary cost sharing you can use alternative language such as:

- Professor X will direct all research activities associated with project [specify].
- Professor X will oversee [all aspects of] the project.
- Professor X will participate in the project at every stage [specify].
- Professor X will provide scientific direction and supervision for the project [including...].

### **Things to Note**

Always double check your math to assure accuracy.

Be aware of the budget restrictions as set forth in the proposal announcement, if any – some examples are: the number of months of support that can be requested, a cap on the travel amount, the type of travel allowed (foreign vs. domestic), restricted line items that should not be requested, etc.

All costs included on a budget submitted in a proposal should be allowable per the cost principles or agency roles/regulations. Just because a budget is approved as submitted, it doesn't make the costs allowable if it's in violation of some other policy. All costs incurred on an award are subject to final determination of audit.

Do yourself a favor and don't try to undercut your budget in order to make your proposal more competitive. An under budgeted proposal may be funded but you may not be able to meet your objectives without sufficient funds. If the sponsor comes back to you asking for a reduced budget, you should inquire as to how the scope can be cut back—don't set yourself up for failure.

## **SAMPLE BUDGET JUSTIFICATION (PI: JONES)**

The total budget requested for this proposal is for three years with a majority going towards student salaries and scientific personnel educational support and for inter-lab exchange. Modest amounts are requested for equipment acquisition and supplies necessary for the project. The indirect cost rate (38.4%) is among the lowest of any major research university.

### **Budget**

Salaries: One month per year senior personnel support is requested for the PI to oversee and direct the project. The PI receives 9 months salary from the University of Hawaii for the academic year. Full support is requested for a graduate student position and this project will comprise a major portion of their dissertation. Summer support is requested for one undergraduate to work in the laboratory and gain research experience and aid in project completion. This undergraduate summer student will be mentored by the graduate student and the PI.

Travel: Funds are requested for travel from Hawaii for two people for one meeting per year. Travel is also requested in the first and second years between University of Tennessee and UH for coordinated experimentation.

Materials and Supplies: Funds for laboratory supplies in years 1-3 and an additional amount in the first year to replace our aging computer/software. This computer will be used for proteomics and transcriptomics data processing. Supply funds will be used to make measurements to characterize the photophysiology of the different strains of *Anabaena* in the context of microarray and protein characterization and are based on previous years' expenditures. We have used all of these techniques in the past and these laboratory supply figures represent modest estimates. Finally, we request funds in years 1-2 to support the iTRAQ proteomic analyses. This includes the use of 7 total protein analyses (\$6000 each), each of which can accommodate 8 samples. This represents the minimum number of 8-plex analyses necessary to optimize the protein extraction protocol and to test the various temperature conditions among the 2 strains.

Equipment: Funds are requested to acquire an oxygen flash yield system to make measurements of the photosystems that are at the core of this project.

Publication: Funds are requested to defray publication costs in years two and three for dissemination of results.

Computer Services: Modest funds are requested to support existing internet connections and research computer services supplied by the school.

### **PERSONNEL:**

Jones receives numerous requests annually from potential graduate students to study marine phytoplankton using a combination of the physiological and molecular techniques. Annually the department has an acceptance rate of ~10% and there are many outstanding candidates that are turned down. Tuition is waved for students on research fellowship. In addition, Jones has trained numerous undergraduate students in the laboratory and again receives many more requests than can be accommodated. The undergraduate traineeship is an excellent experience for students to learn about the modern molecular and physiological techniques. Historically we have drawn students from top universities including MIT and Stanford.