TUTORIAL 19

Principal Investigator (PI) and Applicant Requirements

One of the struggles for a startup preparing to submit an SBIR or STTR proposal is to determine who should be the Principal Investigator (PI). In making this decision, many things have to be considered including the PI's role in the project; how the credentials of the PI are likely to be perceived by the reviewers, and intellectual property issues. As startups often need to supplement their research and development team with consultants and subcontractors, this discussion will begin with a review of the responsibilities of the applicant.

The applicant is the organization submitting the proposal and the entity with which the Department of Energy (DOE) enters a grantee relationship. With both SBIR and STTR applications the applicant is always the small business, often referred to as the small business concern or SBC. The applicant has *"overall responsibility of the project, including financial management and direction and control of the performance."* The applicant also brings the needed resources together to accomplish the proposed work. The resources include employees of the applicant, as well as subcontractors, and/or consultants.

The primary role of immediate concern to the applicant is the PI. In the case of a Small Business Innovation Research (SBIR) application, the PI must be an employee of the small business; while with a Small Business Technology Transfer (STTR) application, the PI may be an employee of the research institution (RI) to whom work has been subcontracted or the PI may be an employee of the small business. Please note that when an applicant submits an STTR proposal – the subcontract agreement is with the RI and not with specific individuals from the research institution.

ROLE OF THE PI

So, what does a PI do? The DOE's Funding Opportunity Announcement (FOA) specifies that "the Principal Investigator is the key individual designated by the applicant to direct the project." Only one PI is acceptable per project, NO co-PIs are allowed. The FOA goes on to say that *"the PI must be knowledgeable in all technical aspects of the application and be capable of leading the research effort."* So, what does it mean to be knowledgeable in all technical aspects of the application? For sake of example, let's assume that you have a Ph.D. in organic chemistry, but the proposed research requires the skills of a software engineer – would the reviewers consider the Ph.D. chemist to be a credible PI on a software development project? In exploring this question further, let's assume that you have managed many research projects during your career – but none that involve the specialized skills of a computer scientist. The same question should be asked– will the reviewers consider a sound PI an individual with no expressed experience in this technical area. As the PI, consultants, and subcontractors account for approximately 30% of the evaluation criteria – one takes a risk when there isn't a clear alignment of the PIs technical knowledge and experience with the technology in question.

So, you can see that "DOE's evaluation of the application is critically dependent upon the qualifications of the PI." If the PIs credentials and experience do not align with DOEs expectations, your application is likely to be viewed as risky. If you decide to take that risk anyway and list yourself as the PI when there is not a clear alignment of technical capability, be sure to make the case as to why this is viable. Don't assume the rationale is self-evident. Another potential course of action is to modify the statement of work (SOW) so that the research requires a combination of skills – some of which are within your technical area of expertise. However, in so doing – make sure that the SOW remains aligned with the topic, is innovative, and provides good value to the DOE.

If selected for an award, DOE requires the small business to certify that you have implemented a property and commercialization rights agreement with the Research Institution.

PRIMARY EMPLOYMENT UNDER AN SBIR

With an STTR application, the PI can be employed by the research institution.

What alternatives do you have if you don't have the requisite technical skills to be the PI? In this case, you must look to bring in someone with the skills required and make a contingent hire – i.e., find a qualified person who commits to joining your firm and serving as the PI if your company wins the award. It is important to keep in mind that "the PI's primary employment must be with the applicant SBC at the time of award and during the conduct of the proposed research. The phrase "at the time of award" is important as it means that the individual who commits to being the PI does not have to become a member of your team when you submit your application, but only at the time of award.

The term "primary employment" also has a specific meaning. Primary employment means that no less than 20 hours per week is spent in the employment of the applicant SBC during the conduct of the project and no more than 19 hours per week spent in the employment of another organization." The minimum amount of time that DOE has said is credible for a PI to spend on a Phase I over a nine- month period is three hours per week. For example, a nine-month project, lasting 39 weeks, would require a minimum commitment of 117 hours.

PRIMARY EMPLOYMENT UNDER AN STTR

Another option to consider is to submit your proposal as an STTR proposal with the PI having primary employment with the Research Institution. The applicant SBC must still provide technical control and oversight of the project. *"If the PI is employed by the research institution, his or her primary employment (at least 20 hours per week) must be with the research institution in order to qualify under STTR and the research institution must provide at least 30% of the research effort."* Only 60% of the research effort can be subcontracted via an STTR – the rest needs to be accomplished by the small business.

Although conceptualizing your proposal as an STTR submission may solve one problem – it may lead to another issue – intellectual property (IP) ownership. If the PI is employed by a research institution and performs up to 60% of the research and makes potentially patentable discoveries – who owns the IP? It is important to consult with the RI at the outset to determine how this scenario would be handled – and to reach an agreement that is viable before committing to proceed down the STTR route. If selected for an award, DOE requires the small business to certify that you have implemented a property and commercialization rights agreement with the RI. A copy of the certification form can be found on the DOE SBIR website. If you have limited experience with drafting property and commercialization agreements, DOE also provides a model agreement that you can use.

In closing, while considering how to prepare a Phase I application that is responsive to a DOE Phase I topic – be sure to consider the importance of the PI and take the requisite time to find the best person for this role.