

June 16, 1997

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: IMPROVING OPPORTUNITIES FOR UNIVERSITIES TO PARTICIPATE IN THE NRC RESEARCH PROGRAM

PURPOSE:

1. To inform the Commission of the current level of university participation in research projects.
2. To obtain Commission endorsement of the staff's approaches to encourage additional university participation in research that will provide more direct benefit to NRC's research program, than has been provided in the past through the Educational Grant Program.

ISSUE:

What means are available and legally supportable to provide avenues for expanding university involvement in NRC's research program?

SUMMARY:

In response to COMSECY-96-066, the staff considered a range of options open to the NRC and concluded that use of certain contracting and financial assistance mechanisms can improve opportunities for universities to participate in NRC research work. The staff also found that, short of specific legislation which changes the laws which govern NRC procurement of goods and services, NRC cannot give preferential treatment to universities in the award of contracts. Hence, except where a unique capability can be shown to exist, universities must compete for contracts like other bidders. Accordingly, to accomplish the Commission's objectives in COMSECY-96-066, within the current legal and regulatory framework and without increasing grants, the staff proposes a variety of activities aimed at making universities more informed and competitive to facilitate placement of NRC research work with universities. This integrated approach includes waiving the requirement to publicize proposed research procurements in the Commerce Business Daily (CBD), expanding use of cooperative agreements, increasing university awareness of NRC research opportunities through the use of Internet capabilities and personal interaction, and expanding use of multiple award contracting mechanisms.

BACKGROUND:

In response to Strategic Assessment Issue DSI 22, "Research," submitted to the Commission for consideration in the fall of 1996, the Commission issued COMSECY-96-066 which, among other things, asked the staff to consider additional approaches to working with universities beyond the existing Educational Grants Program and to consider an appropriate higher goal for the percentage of research carried out directly by universities.

Currently, the Office of Nuclear Regulatory Research (RES) uses grant, cooperative agreement, and contract mechanisms (see Attachment 1 for a more detailed description of these instruments) when placing work with universities. RES has active university projects in almost all of its programmatic areas, and university research contributes to key programs such as thermal-hydraulics. While the RES program budget has declined from \$68.7 million in FY 1996 to \$56.3 million in FY 1997, funding going directly to universities has increased by \$0.4 million for a total expenditure to universities of nearly 7 percent of the FY 1997 RES budget.

In FY 1996, RES funded projects totalling \$2.9 million at 15 universities. Also in FY 1996, RES awarded educational grants totalling \$0.8 million to 12 universities for an FY 1996 total of \$3.7 million awarded to universities.

In FY 1997, as of May 30, 1997, RES funded or plans to fund projects at 16 universities totalling nearly \$3.35 million. In addition, RES expects to enter into cooperative agreements totalling \$0.75 million with two more universities. The FY 1997 funding awarded or planned for universities to date is \$4.1 million and the potential exists for additional awards to universities in the remaining four months of the fiscal year.

The FY 1996 and FY 1997 funding levels to universities discussed above do not reflect RES funds supporting subcontracts with universities. For the period May 1997 through April 1998, university subcontracts under RES commercial contracts are projected to exceed \$1.4 million.

DISCUSSION:

The RES Educational Grants Program has been in existence for many years and traditionally has used 1 percent of the RES program budget. Although the research derived from educational grants has proven useful to NRC, unlike a contract, the principal focus of a grant is for the educational institution to carry out a public purpose. Under a grant, NRC can neither direct the research nor can the grant be awarded primarily for the benefit of the NRC. In its most recent budget request, RES reduced its Educational Grants Program budget sub-activity from \$750K in FY 1997 to \$200K in FY 1998-2001. RES has terminated its formal Educational Grants Program and will only issue grants in the future when they are the best mechanism for achieving a purpose of the research program.

In COMSECY-96-066, the Commission suggests that RES coordinate with the Division of Contracts and Property Management (DCPM) in exploring

innovative ways to engage universities consistent with the NRC designation as a Procurement Reinvention Laboratory (PRL). Under the PRL, NRC seeks innovative approaches to streamline the acquisition process and, generally, may waive those requirements of the Federal Acquisition Regulation (FAR) which are not based directly on legislation.

The staff explored a variety of innovative approaches and streamlining measures available under the PRL to increase university participation in NRC's research program, including those provided by recent procurement reform legislation. The staff concluded that recent reforms and other innovative approaches as described below can be combined to enhance opportunities for university participation in NRC's research programs.

The staff proposes the following steps as an integrated approach to increase university participation:

- a. Waiver of advance public notice. The CICA (Competition in Contracting Act of 1984) permits waiver of the advance public notice requirement where a case can be made that competition will not be restricted, if an agency's request is approved by Office of Federal Procurement Policy (OFPP) and the Small Business Administration. The NRC staff considered whether this waiver authority could be used to increase contracting with universities. Under the PRL, NRC previously obtained a temporary waiver effective through April 1998, to permit Contracting Officers to exempt selected research and technical assistance procurements from publishing advance notice in the CBD. The waiver was granted on the basis that the contracting community, which can successfully compete for these contracts, is small and known to NRC, and therefore, competition would not be restricted by limiting the solicitation to known sources. (Under the terms of the waiver, small businesses that express an interest in a proposed contract are also given an opportunity to compete.) Therefore, in instances where universities are considered the only known source for research projects, NRC may waive the public notice requirement and solicit proposals from those universities.

Under the PRL, NRC has waived the CBD requirement for certain RES projects and solicited proposals from a limited number of sources, including universities. RES and DCPM will review future research projects for applicability of this waiver provision and will limit competition to universities where appropriate.

- b. Expand use of cooperative agreements with universities. To the extent that future work involves projects for the public benefit and from which the NRC can also derive tangible benefit, RES will utilize cooperative agreements as a vehicle to accomplish increased involvement with universities. Unlike commercial contracts, there is no statutory requirement to compete cooperative agreements. In addition, NRC recently streamlined the procedures for awarding cooperative agreements. Accordingly, NRC can use a simplified cooperative agreement process to make awards directly to universities where the work to be performed is mutually beneficial and serves a public purpose. The cooperative agreement mechanism must not be used for acquisition of supplies or services for the direct benefit of the agency and may not be used to avoid competition. Under a cooperative agreement, the NRC can be substantially involved in the work being performed. NRC would be able to benefit from the technical expertise available at universities, along with other interested parties. In that vein, RES currently is examining the possibility of entering into cooperative agreements with two university consortia/centers of expertise for work in the areas of human performance and digital instrumentation and control. In the future, RES will continue to seek opportunities to use cooperative agreements.
- c. Increase university awareness of research contracting opportunities at NRC. The staff will increase university awareness of the NRC research program and inform universities of all contract and cooperative agreement opportunities in order to promote more responsive proposals.

First, RES and DCPM will work together to develop Internet communication links with universities to inform them of opportunities and new procurement innovations which can assist in their participation in NRC procurements. For example, DCPM maintains a "Contracting with NRC" Internet homepage containing a forecast of contracting opportunities and information on the bidders mailing list to which universities can be referred, using Internet e-mail. RES and DCPM will contact universities with nuclear engineering departments, and any other universities and colleges that have shown an interest in contracting with NRC, to invite them to complete an application so that we may add them to the bidders mailing list. (As of this writing, only one university has asked to be placed on this list.) This will allow us to automatically notify them of contracting and cooperative agreement opportunities. Second, RES will seek an invitation to brief Nuclear Engineering Department Heads when they meet at one or more American Nuclear Society meetings on the overall RES program and its prospective contracting opportunities. Third, RES and DCPM will schedule one or more visits to universities or schedule public workshops wherein the RES program and its associated general contracting opportunities will be explained to other interested universities and colleges. As a result of attending these meetings and workshops, universities with research capabilities may be more responsive to RES Requests for Proposals. Fourth, COMSECY-96-066 alluded to the establishment of research consortia. NRC can encourage the establishment of consortia, and universities can be made aware of contracting opportunities where forming consortia might be an advantageous way to submit successful proposals.

Recently, RES announced a large procurement opportunity in the thermal hydraulics area, and more than one university consortium submitted a proposal. At the briefings and workshops mentioned above, RES will highlight areas where teaming of expertise and resources of more than one university would be highly desirable. Finally, universities will be invited to attend the annual Water Reactor Safety Information Meeting to increase their general awareness of nuclear reactor safety research that is sponsored by NRC and other organizations and countries around the world.

- d. Utilize multiple award contracting mechanisms to address research issues. The Broad Agency Announcement (BAA) is a competitive contract mechanism used to solicit basic research "ideas" and present solutions to research issues for which NRC has not yet decided upon a plan of action.

Multiple awards may be made as a result of a single BAA Announcement. BAAs may be used to fulfill requirements for scientific study and experimentation directed toward advancing the state-of-the-art or increasing knowledge/understanding rather than focusing on a specific solution. Selection is based upon the merit of each proposal's solution to the technical problem. BAAs have been used by RES with considerable success and have resulted in multiple awards to universities. RES will continue to use BAAs as a contracting mechanism when technical problems of a suitable nature arise. RES will work with DCPM to ensure timely publication of these announcements in the CBD and on the "Contracting with NRC" homepage.

Also, under Federal-wide procurement reform, multiple award task order contracting is a mechanism encouraged by the Office of Federal Procurement Policy (OFPP) and may increase contracting opportunities for universities. Recent legislative changes implemented in FAR Section 16.504(c) establish a preference for awarding multiple task order contracts under a single competitive solicitation for the same or similar requirement to two or more sources. Formal competition is not required for placement of individual task orders under these contracts. Each task order is placed after consideration of the contractors' capabilities to meet the agency's need. Previously, award of individual task orders had to be formally competed or placed under a rotational system. Because this mechanism permits contract award to more than one qualified competitor, the chances for contract award and task order placement to qualified universities willing to compete for NRC work are greater. RES plans to review future requirements for the possibility of using multiple awards as a viable mechanism which will increase the opportunity to place work with qualified universities.

The staff also considered other alternatives for limiting competition to universities including: exceptions from full and open competition to restrict contracts to universities; and, limiting solicitations to universities under simplified acquisition procedures. The staff concluded that existing statutes preclude such limitations, absent the existence of a unique capability at the university or other compelling circumstances. A summary of this analysis is provided in Attachment 2.

With regard to an appropriate higher goal for research carried out directly by universities, RES proposes a range of 7 percent to 10 percent of its annual appropriated contract support budget. This compares to a level of 5.4 percent achieved in FY 1996 and our projected estimate for FY 1997 of 7 percent.

There are no resource ramifications to the RES budget for any of the approaches discussed above. All alternatives that are proposed can be accomplished with resources provided in the existing RES budget.

COORDINATION:

The Office of the General Counsel has no legal objection to this paper. OCFO has no objection to the resource estimates contained in this paper.

RECOMMENDATION:

That the Commission endorse the integrated approach discussed above.

L. Joseph Callan
Executive Director for Operations

Contacts: Alois J. Burda, RES
415-6662
Mary Lynn Scott, ADM
415-6179

Attachments: As stated

ATTACHMENT 1

Descriptions of Contracts, Grants, and Cooperative Agreements

A **contract** is used when the purchase is for the direct benefit or use of the Federal government and is governed by the Federal Acquisition Regulation (FAR) provisions.

A **grant agreement** is a legal instrument reflecting a relationship between the United States Government and a recipient when:

- 1) money, property or services is transferred to the recipient to accomplish a public purpose of support or stimulation (as opposed to the acquisition of property or services for the direct benefit or use of the United States Government); and,
- 2) substantial involvement **is not** expected between the executive agency and the recipient when carrying out the activity contemplated in the agreement.

Agency involvement under a grant may include:

- 1) approval of recipient plans or applications prior to award;
- 2) Federal oversight during the project such as site visits, performance reporting, financial reporting, and audits to ensure that standards, objectives, terms, and conditions of the project are accomplished;
- 3) general statutory requirements agreed to in advance of award such as civil rights, environmental protection, and provisions for the handicapped;
- 4) review of performance after completion; and,
- 5) unanticipated agency involvement to correct deficiencies in project or financial performance from the terms of the assistance instrument.

A **cooperative agreement** is a legal instrument reflecting a relationship between the United States Government and a recipient when:

- 1) money, property or services are transferred to a recipient to accomplish a public purpose of support or stimulation (as opposed to the

acquisition of property or services for the direct benefit or use of the United States Government); and,

2) substantial involvement **is** expected between the executive agency and the recipient when carrying out the activity contemplated in the agreement.

Substantial involvement in a cooperative agreement may include:

- 1) authority to halt activity if specifications or work statements are not met;
- 2) review and approval of one stage of work before another can begin;
- 3) agency and recipient collaboration or joint participation;
- 4) monitoring to permit specified kinds of direction or redirection of the work because of interrelationships with other projects;
- 5) highly prescriptive agency requirements which limit recipient discretion; (administrative requirements such as, security, document format)
- 6) review and approval of key personnel;
- 7) substantial, direct agency operational involvement or participation during the assisted activity.

The rationale for use of grants and cooperative agreements is the same; for public purpose and benefit. The key difference between the two instruments is that the agency has substantial involvement under a cooperative agreement. Substantial involvement means that the agency and recipient may collaborate or jointly participate in the project and the recipient can expect closer agency oversight and control for management of the project, which is different from the limited Federal oversight over reporting and funding for grants.

ATTACHMENT 2

Analysis of Alternatives for Restricting Competition to Universities Under the NRC's Procurement Reinvention Laboratory

The Competition in Contracting Act of 1984 (P.L. 98-369) (CICA) promotes full and open competition by limiting exemptions and permits only a few very specific exceptions. Because these are legislated requirements, the NRC has limited ability to restrict competition so as to give universities increased opportunities. In addition to the staff's recommendations, two other options were examined and are discussed below:

FAR Exception to Competition

The staff also considered whether an exception from the use of full and open competition exists which would in effect grant a waiver to limit some competitions to universities. The FAR, in implementing the CICA, permits the agency to use other than full and open competition when it is necessary to award the contract to a particular source or sources in order to establish or maintain an essential engineering, research, or development capability to be provided by an educational or other non-profit institution (48 CFR 6.302-3 (1996)). This same exception was the basis for placing certain work at NRC's Federally Funded Research and Development Center. NRC staff considered whether, if supported by facts, the NRC might make a case that because the academic field of nuclear engineering is shrinking at a rate that jeopardizes future ability of the agency to hire and contract for nuclear engineering professionals, competition limited to universities is necessary to ensure that future needs can be met. The staff concluded that this authority is intended for meeting current needs of the agency rather than for preserving an academic field which trains professionals to meet future needs. Therefore, this exception would not be appropriate as a way to limit procurement opportunities to universities.

Simplified Acquisitions

Simplified acquisitions (purchase orders) were also examined for applicability to universities. Section 4004 of the Federal Acquisition Streamlining Act of 1994 sets aside all simplified acquisitions over \$2,500 and equal to or less than \$100,000 for small business concerns. Since they do not qualify as small businesses concerns, universities normally would not qualify for simplified acquisitions unless no qualified small business can do the work.