



# ***ATP Proposal Preparation Kit***

*April 2007*

**NIST**  
National Institute of  
Standards and Technology  
Technology Administration  
U.S. Department of Commerce

**For a quick look to see if ATP is right for you and to answer the following questions:**

- **What is ATP?**
- **Who may apply?**
- **How can I receive funding?**
- **When do I submit my proposal?**
- **Where do I submit my proposal?**

**See Chapter 1, pages 1 through 2, in this Kit.**

**Telephone: 1-800-ATP-FUND (1-800-287-3863)\***

**Fax: 301-926-9524 or 301-590-3053**

**E-mail: [atp@nist.gov](mailto:atp@nist.gov)**

**Internet: <http://www.atp.nist.gov>**

**\*Call this ATP toll-free hotline to hear recorded messages about the current status of ATP and workshops being held or to request that a name be added to the ATP mailing list.**

## Foreword



I am pleased to provide you with this updated version of the *ATP Proposal Preparation Kit*. This kit provides all the necessary requirements and guidelines for developing an ATP proposal during fiscal year 2007. All individuals who are currently on the ATP mailing list will receive a copy of this kit as well as any competition announcements. If you are not on our mailing list and wish to be added, submit an electronic request at <http://www.atp.nist.gov/atp/atpform.htm> or call us at 1-800-287-3863. To learn more about ATP, I encourage you to visit our website at <http://www.atp.nist.gov>. The website offers general

information about the program, a searchable database of previously funded ATP projects, and much more.

As U.S. industry continues to compete in the global markets and faces continued challenges from foreign competitors, we remain hopeful that you will consider applying to our program. Innovation and entrepreneurship remain our best strategy for continuing to hold our competitive edge and develop new solutions to technical challenges that will change lives in profound ways. ATP was created to leverage our strengths, encourage entrepreneurship in research and development, and to foster technological innovation. The path-breaking new ideas that are the essence of ATP projects can come from any industry and any company. We look forward to working with you to dramatically change the future direction of technology.

### **Marc G. Stanley**

Director, Advanced Technology Program  
National Institute of Standards and Technology





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## CHAPTER 1

# Questions and Answers About the Advanced Technology Program (ATP)

## A. GENERAL INFORMATION

### 1. What is ATP?

In 1990, ATP began to provide cost-shared multi-year funding to single companies and industry-led joint ventures to accelerate the development and broad dissemination of challenging, high-risk technologies with the potential for significant commercial payoffs and widespread benefits for the nation. This unique government-industry partnership aids companies in accelerating the development of emerging or enabling technologies that lead to revolutionary new products and industrial processes and services that can compete in rapidly changing world markets. ATP challenges the research and development (R&D) community to take on higher technical risk projects with commensurately higher potential payoffs for the nation than they would otherwise pursue. The ATP statutory authority is 15 U.S.C. § 278n (see Appendix A). The ATP implementing regulations are set forth in 15 C.F.R. Part 295 (see Appendix B). Both are also available at <http://www.atp.nist.gov/atp/helpful.htm>.

### 2. Who may apply?

A U.S.-owned, single, for-profit company or an industry-led joint venture may apply. See Section B in this chapter for more details.

### 3. How can I receive funding?

You must submit a proposal to ATP in response to a notice published in the *Federal Register* announcing a competition and availability of ATP funds (solicitation/request for proposals). Competition notices are also posted on the ATP website (<http://www.atp.nist.gov>) and at <http://www.grants.gov> (Federal Funding Opportunity).

### 4. What information is required in an ATP proposal?

Information requirements are discussed in detail in Chapters 2 and 3 of this Proposal Preparation Kit.

### 5. How are proposals submitted?

Proposals may be submitted either electronically or in hardcopy. Electronic submissions are encouraged and offer many benefits to the proposer, including no mailing and copying fees. See Chapter 2, Section A, for format instructions and Chapter 2, Section B, for electronic submission guidance.

### 6. Will confidential/proprietary information in my proposal be protected?

Yes. All individuals who have access to proposals must sign nondisclosure agreements. The government will protect confidential/proprietary information about business operations and trade secrets possessed by any company or participant to the full extent of the law. Such information will be withheld from disclosure pursuant to the following statutes, which can be found at <http://www.atp.nist.gov/atp/helpful.htm>.

- a. ATP Statute—15 U.S.C. § 278n(d)(5).
- b. Trade Secrets Act—18 U.S.C. § 1905.
- c. Freedom of Information Act (FOIA)—5 U.S.C. § 552(b).
- d. Economic Espionage Act—18 U.S.C. § 1832.

In view of the above, proposers are advised that proposals are unlikely to be competitive if significant technical and/or business details are omitted due to the proposer's reluctance to reveal confidential/proprietary information.

## **7. Where can I seek help with preparing my proposal?**

a. Contact the NIST Hollings Manufacturing Extension Partnership (MEP), a nationwide network of locally managed extension centers whose sole purpose is to provide small- and medium-sized manufacturers with the help they need to succeed. The centers provide guidance to high-technology companies seeking resources and teaming relationships that help with commercialization efforts. To contact an MEP center, call 1-800-MEP-4-MFG (1-800-637-4634) or visit MEP's website at <http://www.mep.nist.gov>.

b. Contact state agencies, for example, economic development agencies.

## **8. Does ATP hold any public meetings or conferences to assist in proposal preparation?**

Yes. ATP typically holds one or more proposers' conferences after a competition is announced. These public meetings provide general information regarding the ATP, tips on preparing proposals, and the opportunity for questions and answers. Proprietary technical or business discussions about specific project ideas with NIST staff are not permitted at these conferences or at any time before submitting the proposal to ATP. Therefore, you should not expect to have proprietary issues addressed at proposers' conferences.

Attendance at ATP proposers' conferences is not required; many successful ATP recipients have not attended a proposers' conference. However, those who have attended said they found the information helpful. Information regarding dates and locations of ATP proposers' conferences is published in the *Federal Register* and Federal Funding Opportunity notices, and posted on the ATP and Grants.gov websites. Additionally, all on the ATP mailing list (<http://www.atp.nist.gov/atp/atpform.htm>) are notified when the conferences are announced.

Presentation materials from proposers' conferences will be made available on the ATP website.

NIST/ATP staff will not critique proprietary project ideas while they are being developed by a proposer. However, NIST/ATP staff will, at any time, answer questions that you may have about our project selection criteria, selection process, eligibility requirements, cost-sharing requirements, and the general characteristics of a competitive ATP proposal.

## **9. Is there a deadline for submitting an ATP proposal?**

Yes. The deadline date(s) will be included in the *Federal Register* and Federal Funding Opportunity notices announcing the competition (solicitation/request for proposals), and posted on the ATP website. Once an ATP solicitation/request for proposals is published, proposals may be submitted until the deadline date(s). The most up-to-date information about ATP competitions is posted on the ATP website. In addition, you can have your name added to the ATP mailing list (<http://www.atp.nist.gov/atp/atpform.htm>) so that you are notified when a new competition is announced.

## **10. Where do I submit proposals?**

Proposals should be submitted to either of the following locations and not directly to ATP staff:

- a. Electronic: [www.grants.gov](http://www.grants.gov)
- b. Paper copy:

Advanced Technology Program  
National Institute of Standards and  
Technology  
100 Bureau Drive, Stop 4701  
Gaithersburg, MD 20899-4701

## 11. Whom do I contact if I have questions?

| Subject Area  | Point of Contact   |
|---|--|
| Administrative, budget, cost-sharing, and eligibility questions                       | Barbara Lambis<br>Phone: 301-975-4447<br>Fax: 301-869-1150<br>E-mail: <a href="mailto:barbara.lambis@nist.gov">barbara.lambis@nist.gov</a>             |
| Human and/or animal subjects used in research   | Lawrence Uhteg<br>Phone: 301-975-8779<br>Fax: 301-548-1087<br>E-mail: <a href="mailto:lawrence.uhteg@nist.gov">lawrence.uhteg@nist.gov</a>             |
| Project selection criteria and other programmatic questions                           | Barbara Cuthill<br>Phone: 301-975-3273<br>Fax: 301-975-2147<br>E-mail: <a href="mailto:barbara.cuthill@nist.gov">barbara.cuthill@nist.gov</a>          |
| Electronic proposal submission  | Christopher Hunton<br>Phone: 301-975-5718<br>Fax: 301-840-5976<br>E-mail: <a href="mailto:christopher.hunton@nist.gov">christopher.hunton@nist.gov</a> |
| Foreign participation as single-company proposers, joint ventures, and subcontractors | Kathleen McTigue<br>Phone: 301-975-8530<br>Fax: 301-975-4776<br>E-mail: <a href="mailto:kathleen.mctigue@nist.gov">kathleen.mctigue@nist.gov</a>       |
| Grant and cooperative agreement rules and regulations                                 | Nadine DeJesus<br>Phone: 301-975-6080<br>Fax: 301-840-5976<br>E-mail: <a href="mailto:nadine.dejesus@nist.gov">nadine.dejesus@nist.gov</a>             |

## B. ELIGIBILITY

### 1. Who is eligible to apply?

U.S.-owned, single, for-profit companies and industry-led joint ventures may apply for ATP funding. In addition, companies incorporated in the United States that have parent companies incorporated in another country may apply as discussed in Section 3 below. The term company means a for-profit organization, including sole proprietorships, partnerships, limited-liability companies (LLCs), and corporations (15 C.F.R. § 295.2).

a. **Single Company**—a single small, medium, or large for-profit company, including an LLC. The single company must be substantially involved in the R&D, with a leadership role in the project and defining the research agenda.

b. **Joint Venture**—at least two separately owned for-profit companies, both of which are

substantially involved in the R&D and both of which are contributing to the cost-sharing requirement. ATP joint ventures consist of companies that formally agree (i.e., sign a Joint Venture Agreement as discussed in Chapter 2, Section C) to collaborate on the R&D and develop an effective plan to commercialize the technology if successful. In addition to comprising at least two separately owned for-profit companies, a joint venture may include additional for-profit companies and other organizations that perform research and that may or may not contribute nonfederal funds to the project.

### 2. Can universities, government laboratories, independent research organizations, and nonprofit organizations participate?

Yes. Universities, government laboratories (excluding NIST laboratories), independent research organizations, and nonprofit



organizations may participate in an ATP project in the following two ways:

- a. as subcontractors to a single company or to a joint venture.
- b. as additional partners in a joint venture. In addition to a for-profit company, any one of these four types of organizations (universities, government laboratories, independent research organizations, and nonprofit organizations) can serve as the catalyst to organize a joint venture. However, of these four types of organizations, only an independent research organization or a nonprofit organization may submit a proposal on behalf of a joint venture and administer the project, provided that the following two conditions are met:

(1) As described above, the joint venture must include at least two separately owned for-profit companies, both substantially involved in the R&D and both contributing to the cost-sharing requirement.

(2) The joint venture must be industry-led. In other words, the industrial partners must take a leadership role in programmatically steering the project, facilitate definition of the research agenda, be substantially involved in the R&D, and commit to the commercialization plans if the technology is successfully developed.

### **3. Can a foreign-owned company apply for ATP funding?**

Yes, provided that certain requirements are met. A company incorporated in the United States that has a parent company incorporated in another country is eligible to apply for and receive an ATP award if it meets the conditions in the ATP legislation (15 U.S.C. § 278n(d)(9)) and regulations (15 C.F.R. § 295.3). Before making the final award, ATP will make a foreign-eligibility finding based on these conditions regarding the company's participation in the ATP project. The foreign eligibility finding involves the collection of evidence of whether the following conditions are met:

a. The company's participation in the ATP project is in the economic interest of the United States, and

b. The home country of the parent company provides all of the following:

(1) comparable opportunities for U.S.-owned companies to participate in government-funded programs similar to ATP,

(2) comparable local investment opportunities for U.S.-owned companies, and

(3) adequate and effective protection of U.S.-owned companies' intellectual property rights.

ATP takes responsibility for gathering information related to the above requirements. The submitting organization must provide information requested on the Foreign-Owned Company Questionnaire (see Exhibit 9) that relates to the role of the foreign-owned company in the project to help address foreign eligibility requirement 3.a above.

It is important, however, that the information requested on the Foreign-Owned Company Questionnaire be provided in a complete form at the time of proposal submission because it is used to assess the foreign-owned proposer's ability to bring about economic benefits to the United States. Information requested on the Foreign-Owned Company Questionnaire relates to evidence that the company's participation is in the economic interest of the United States as stated in 3.a. above and includes the following:

#### *Commitment to Project:*

(1) A sound justification that the involvement by the company and its role in the project is necessary to achieve the technical or commercial objectives of the project;

(2) Evidence that the company makes investments in research, development, and manufacturing in the United States (the location and square footage of facilities and special equipment where the project will be carried out);

(3) Evidence that the company makes significant contributions to employment in the United States (number of employees);

#### *Commercialization Plans:*

(1) Evidence that the company agrees to promote the manufacture of products within the United States resulting from ATP-supported technology and to procure supplies from competitive U.S. suppliers (for instance, will they incorporate the technology into existing product lines or processes, or will they develop new products or processes?); and

(2) Other factors relevant to the project's potential to produce broad-based economic benefits for the United States (i.e., licensing arrangements).

#### **4. Is a foreign-eligibility finding required for foreign subcontractors?**

No. The submitting organization, however, must justify the use of foreign-owned or foreign-located subcontractors or subsidiaries and explain how their participation will benefit the U.S. economy (see Exhibit 10, R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire) and achievement of the project goals. The completed Questionnaire should state how and why U.S. sources were judged to be unavailable and inadequate in meeting the project goals.

#### **5. Can a foreign-owned company without a U.S.-incorporated subsidiary receive an ATP award?**

No. Foreign-owned companies located outside the United States cannot receive an ATP award. According to ATP's founding legislation, only U.S.-owned companies and U.S. subsidiaries of foreign-owned companies that meet certain requirements are eligible to receive ATP funding.

#### **6. Can a company owned by non-U.S. citizens and without a foreign parent company receive an ATP award?**

No. However, a company that is incorporated in the United States and majority-owned by one or more non-U.S. citizens but that does not have a foreign parent company may apply for an ATP award. However, it cannot receive any funding unless the ownership issue has been resolved (e.g., the owner has since become a U.S. citizen, or ownership has been transferred to a U.S. citizen or citizens) before final award selections. Issuing an award will not be deferred for this issue to be resolved.

#### **7. Where can I find additional information regarding foreign-owned company eligibility?**

Additional information is available in the ATP booklet ATP Eligibility Criteria for U.S. Subsidiaries of Foreign-Owned Companies: Legislation, Implementation, and Results, which is available at <http://www.atp.nist.gov/eao/ir-6099/contents.htm>.

#### **8. Can a Cooperative Research and Development Agreement (CRADA) be involved in an ATP project?**

Possibly. CRADAs require provision for ownership of any resulting patentable inventions as described in Section F of this chapter, a license for any intellectual property necessary to practice the resulting patentable inventions, and must be otherwise acceptable to ATP. Therefore, parties are encouraged to carefully consider whether a CRADA is appropriate and to contact the NIST Counsel's office (301-975-2803) in advance of submitting a proposal.

### **C. SELECTION CRITERIA AND SELECTION PROCESS**

#### **1. What selection/evaluation criteria are used to select ATP proposals for funding?**

The evaluation criteria used to select a proposal for funding and their respective weights are found in 15 C.F.R. § 295.6 and are listed below. No proposal will be funded unless ATP determines that it has scientific and

technological merit and that the proposed technology has strong potential for broad-based economic benefits for the nation. Additionally, no proposal will be funded that does not require federal support, that is product development rather than high-risk R&D, that does not display an appropriate level of commitment from the proposer, or that does not have adequate technical and commercialization plans. Meeting the scientific and technological merit criterion will not make up for major flaws in the potential for broad-based economic benefits selection criterion and vice versa. Detailed guidance on how to address the selection criteria is provided in Chapter 3.

a. Scientific and Technological Merit (50 percent). This selection criterion has three critical components: (1) Technical Innovation, (2) Technical Risk With Evidence of Scientific Feasibility, and (3) Technical Plan.

The proposed technology must be highly innovative. The research must be challenging, with high technical risk. It must be aimed at overcoming an important problem (or problems) or exploiting a promising opportunity. The technical leverage of the technology must be adequately explained. The research must have a strong potential for advancing the state of the art and contributing significantly to the U.S. scientific and technical knowledge base. The technical plan must be clear and concise and must clearly identify the core innovation, the technical approach, the major technical hurdles, and the attendant risks, and it must clearly establish feasibility through adequately detailed plans linked to major technical barriers. The plan must address the questions of “what, how, where, when, why, and by whom” in substantial detail. ATP will assess the proposing team’s relevant experience for pursuing the technical plan. The team carrying out the work must demonstrate the high level of scientific/technical expertise needed to conduct the R&D and have access to the necessary research facilities.

b. Potential for Broad-Based Economic Benefits (50 percent). This selection criterion has three critical components: (1) National Economic

Benefits, (2) Need for ATP Funding, and (3) Pathway to Economic Benefits.

The proposed technology must have a strong potential to generate substantial benefits for the nation that extend significantly beyond the direct returns to the proposing organization(s). The proposal must explain why ATP support is needed and what difference ATP funding is expected to make in terms of what will be accomplished with the ATP funding versus without it. The pathway to economic benefits must be described, including the proposer’s plan for getting the technology into commercial use as well as additional routes that might be taken to achieve broader diffusion of the technology. The proposal should identify the expected returns that the proposer expects to gain as well as returns that are expected to accrue to others—that is, spillover effects. ATP will assess the proposer’s relevant experience and level of commitment to the project, the project’s organizational structure and management plan, including the extent to which participation by small businesses is encouraged and is a key component in a joint venture proposal; and for large single-company proposers, the extent to which subcontractor/subrecipient teaming arrangements are featured and are a key component of the proposal.

## **2. How are proposals selected for funding?**

All proposals are selected based on a multi-stage peer-review process, as described in 15 C.F.R. § 295.4 (see Appendix B). All proposals are carefully reviewed by technical and business experts against the established ATP evaluation/selection criteria. A Source Evaluation Board reviews proposals and makes recommendations for funding to a Selecting Official based on the technical and business evaluations and the selection criteria. The Selection Official makes the final determination for funding. All funding decisions are final and cannot be appealed. NIST/ATP reserves the right to negotiate the cost and scope of the proposed work with the proposers who have been selected to receive awards. For example, NIST/ATP may require that the proposer delete

from the scope of work a particular task that is deemed by NIST/ATP to be product development or otherwise inappropriate for ATP support.

### **3. What are the most common reasons that a proposal submitted to ATP is not successful?**

a. Lack of clear definition of technical risks or barriers that prevent progress on the commercial front. Less competitive proposals often fail to answer the question, “What technical issue or issues are preventing you from exploiting this technology for this class of applications?”

b. Evidence of feasibility for the highest technical-risk task(s) or approach(es) has not been adequately documented in the proposal. Although a high level of technical innovation may be involved in overcoming the high-technical risk challenges, the proposer did not provide evidence that their approach is scientifically sound, therefore, technically feasible, either through preliminary experimentation demonstrating proof-of-principle, research or theory drawn upon from the open scientific literature, reduction of an idea to practice, etc.

c. Lack of an innovative technological approach—that is, the concept or end products may be innovative, but the pathway to reaching the goal is based on use of state-of-the-art techniques that will not be advanced.

d. Lack of detail in the technical plan or failure to clearly describe how the path to innovation will be accomplished. For example:

(1) Use of a trial-and-error approach to generate new products or processes based on state-of-the-art techniques that does not result in advancing the methodology beyond trial and error.

(2) Risks in the project not described at the scientific level other than that the approach may not work as expected, or there is no clear identification of alternative mitigation strategies

for overcoming various risks at each step in the R&D plan.

(3) Straightforward scale-ups based on standard engineering practices and state-of-the-art techniques that will not advance scale-up methodology (e.g., faster, better, cheaper the next time).

(4) Use of proprietary techniques that are already developed in-house to generate novel products or processes where there is no expectation to move the technique(s) to a next-generation advancement.

e. A general description of the market opportunity with no specific market segment analysis of, for example, size, sales, potential customers, and competitors.

f. Lack of detail about the approach to be taken to commercialize the technology after the ATP project ends, or failure to address market opportunity.

g. Unconvincing case for the need for ATP funding, or the difference that ATP can make, and failure to describe actions taken to secure non-ATP funding (including evidence of the results of those actions).

## **D. INELIGIBLE PROJECTS AND INELIGIBLE COSTS**

### **1. What types of projects are ineligible for ATP funding?**

a. Straightforward improvements of existing products or product development.

b. Projects that are basic research.

c. Projects that are Phase II, III, or IV clinical trials. ATP rarely funds Phase I clinical trials and reserves the right not to fund a Phase I clinical trial. The portion of a Phase I trial that may be funded must be critical to meeting the scientific and technological merit selection criterion and the trial must be essential for completion of the study. The definitions of all

phases of clinical trials are provided in the *ATP Guidelines and Documentation Requirements for Research Involving Human & Animal Subjects* located at <http://www.atp.nist.gov/atp/helpful.htm>.

d. Pre-commercial-scale demonstration projects where the emphasis is on demonstrating that some technology works on a large scale or is economically sound rather than on R&D that advances the state of the art.

e. Projects that ATP believes would likely be completed without ATP funds in the same time frame or nearly the same time frame, or with the same scale or scope.

f. Predominantly straightforward, routine data gathering (e.g., creation of voluntary consensus standards, data gathering/handbook preparation, testing of materials, or unbounded research aimed at basic discovery science) or application of standard engineering practices.

g. Projects that are simply a follow-on or a continuation of tasks previously funded in ATP projects from essentially the same proposing team.

h. Projects in which the only risk is market oriented—that is, the risk that the end product may not be embraced by the marketplace.

i. Projects with software work, that are predominantly about final product details and product development, and that have *significant* testing that involve users outside the research team to determine if the software meets the original research objectives, are likely to be either uncompetitive or possibly ineligible for funding. However, R&D projects with limited software testing, involving users outside of the research team, may be considered eligible costs within an ATP award when the testing is critical to meeting the scientific and technological merit selection criterion and the testing is essential for completion of the proposed research. These types of projects may also be considered to involve human subjects in research.

## 2. What types of costs are ineligible/unallowable?

The following items, regardless of whether they are allowable under the federal cost principles, are unallowable under ATP:

a. Bid and proposal costs unless they are incorporated into a federally approved indirect cost rate.

b. Construction costs for new buildings or extensive renovations of existing laboratory buildings. However, costs for the construction of experimental research and development facilities to be located within a new or existing building are allowable provided that the equipment or facilities are essential for carrying out the proposed scientific and technical project and are approved by the NIST Grants Officer.

c. For research involving human and/or animal subjects, any costs used to secure Institutional Review Board or Institutional Animal Care and Use Committee approvals before the award or during the award.

d. General purpose office equipment and supplies that are not used exclusively for the research, e.g., office computers, printers, copiers, paper, pens, and toner cartridges.

e. Indirect costs for single-company recipients, which must be absorbed by the company. (Note that with large businesses submitting proposals as single-company proposers, indirect costs absorbed by the large business may be used to meet the cost-sharing requirement.)

f. Marketing, sales, or commercialization costs, including marketing surveys, commercialization studies, and general business planning, unless they are included in a federally approved indirect cost rate.

g. Office furniture costs, unless they are included in a federally approved indirect cost rate.

h. Patent costs and legal fees, unless they are included in a federally approved indirect cost rate.

i. Preaward costs.

j. Profit, management fees, interest on borrowed funds, or facilities capital cost of money.

k. Relocation costs, unless they are included in a federally approved indirect cost rate.

l. Subcontractor expenses such as those for office supplies and conferences/workshops.

m. Subcontracts to another part of the same company or to another company with identical or nearly identical ownership. Work proposed by another part of the same company or by another company with identical or nearly identical ownership should be shown as funded through interorganizational transfers that do not contain profit. Interorganizational transfers should be broken down in the appropriate budget categories.

n. Tuition costs. However, a university participating in an ATP project as a subcontractor or as a joint venture partner may charge ATP for tuition remission or other forms of compensation in lieu of wages paid to university students working on ATP projects but only as provided in OMB Circular A-21, Section J.41. In such cases, tuition remission would be considered a cash contribution rather than an in-kind contribution.

### **3. Can a university employee establish a company and subcontract back to his/her university?**

Generally no. This would present a conflict of interest. However, under certain circumstances, for example, if the university's participation is unique and essential to the project, the subcontracting arrangement may be considered. In such a case, the organization/individual with the conflict of interest may not benefit or profit from the subcontract. For more information, see

the Codes of Conduct guidance in 15 C.F.R. § 14.42 (<http://www.atp.nist.gov/atp/helpful.htm>).

### **4. Can an individual who has a financial or other interest in a company receive a subcontract from that company?**

Generally no. See the answer to Section D.3 in this chapter.

### **5. Will ATP fund research performed outside the United States?**

Possibly. Although ATP is not precluded from funding research performed outside the United States, proposals involving significant research outside the United States would likely be less competitive when evaluated against the ATP selection criterion related to how national economic benefits accrue to the United States. Any proposed use of a foreign subcontractor or a foreign-located organization must be justified (see Exhibit 10, R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire). The completed Questionnaire must include why the work or services cannot be performed equivalently or obtained in the United States.

## **E. FUNDING AND COST SHARING**

### **1. How much funding can a company/organization receive, and is cost sharing required?**

a. A single company can receive up to a total of \$2 million for R&D activities for up to 3 years. ATP funds may only be used to pay direct costs for single-company recipients. Single-company recipients are responsible for funding all of their indirect/overhead costs. Small- and medium-sized companies applying as single-company proposers are not required to provide cost sharing of direct costs. However, they may propose to pay a portion of the direct costs in addition to all indirect costs throughout the project. Proposing to cost-share direct costs will not increase the likelihood that a small- or

medium-sized company will be selected for an award. If a single company proposes to pay direct costs and the proposal is selected for funding, the single company's direct cost share commitment will become a requirement in the cooperative agreement award. The single company will be responsible for meeting its committed cost share in accordance with the approved budget incorporated in the cooperative agreement award.

Large companies applying as single-company proposers must cost share at least 60 percent of the yearly total project costs (direct plus all of the indirect costs). A large company is defined as any business, including any parent company plus related subsidiaries, having annual revenues in excess of \$3.960 billion. (Note that this number will likely be updated annually and will be noted in future annual announcements of availability of funds and revised editions of the ATP Proposal Preparation Kit.)

b. A joint venture can receive funds for R&D activities for up to 5 years with no funding limitation other than the announced availability of funds. Joint ventures must cost share more than 50 percent of the yearly total project costs (direct plus indirect costs).

If an award is issued to a joint venture, each joint venture participant will be responsible for meeting its committed cost share in accordance with the approved budget incorporated in the cooperative agreement award. No joint venture participant will be responsible for the cost-share commitment of any other joint venture participant. However, with the agreement of the joint venture participants, along with notification to the NIST Grants Officer, a joint venture participant that has exceeded its cost-share commitment may allow its excess cost share to be applied to the cost-share deficit of another joint venture participant, so that the overall joint venture cost share is met.

## **2. How does ATP define cost sharing?**

Cost sharing is that portion of the project costs not borne by the federal government and includes direct and indirect costs. Sources of

revenue to satisfy the required cost share include cash and in-kind contributions. Cash contributions can be from recipient, state, county, city, or other nonfederal sources. In-kind contributions can be made by recipients or nonfederal third parties (excluding subcontractors; subcontractors may not contribute cash or in-kind support towards the cost share requirement) and can include, but are not limited to, equipment, research tools, software, and supplies. Except as specified in 15 C.F.R. § 295.25, the value of in-kind contributions shall be determined in accordance with 15 C.F.R. § 14.23. The value of in-kind contributions will be prorated according to the share of total use dedicated to the ATP project. A similar matrix as that prescribed in 15 C.F.R. § 295.25 will be applied to a single company contributing goods to another party, e.g., subcontractor under the project.

Labor/personnel costs are not in-kind contributions; they are cash contributions. ATP limits the total value of in-kind contributions that can be used to satisfy the cost share to 30 percent of the nonfederal share of the total project costs.

Any cost sharing must be in accordance with the "cost sharing or matching" provisions of 15 C.F.R. Part 14, Uniform Administrative Requirements for Grants and Cooperative Agreements With Institutions of Higher Education, Hospitals, Other Non-Profit, and Commercial Organizations (<http://www.atp.nist.gov/atp/helpful.htm>).

Additionally, as with the federal share, any costs included as cost share must be allowable under the following applicable federal cost principles. These documents may be found at <http://www.atp.nist.gov/atp/helpful.htm>:

- a. For-profit companies: 48 C.F.R. Part 31.
- b. Universities: 2 C.F.R. Subtitle A, Chapter II, Part 220 (OMB Circular A-21).
- c. Nonprofit organizations: 2 C.F.R. Subtitle A, Chapter II, Part 230 (OMB Circular A-122).
- d. Hospitals: 45 C.F.R. Part 74, Appendix E.



### **3. What are direct and indirect costs?**

Direct costs are those that are directly related to a specific, single cost objective. Examples include personnel, travel, equipment, subcontractors, and materials and supplies. An indirect cost is any cost not directly identified with a single, final cost objective but identified with two or more final cost objectives or an intermediate cost objective. After direct costs have been determined and charged directly to the project or other work, indirect costs are those remaining to be allocated to the several cost objectives. Because of diverse characteristics and accounting practices of recipient organizations, it is not possible to specify the types of costs that may be classified as indirect costs in all situations. However, typical examples of indirect costs for many organizations include general administration such as salaries and expenses of executive officers, rent, utilities, personnel administration, maintenance, library expenses, and accounting. ATP shall interpret indirect costs in accordance with applicable federal cost principles.

### **4. I am a small startup company and do not have any indirect costs. If funded, the ATP project would be the only project for my company. Will ATP fund a proposal that only has direct costs?**

No. When the assertion is made that a company has no indirect costs, it raises the following concerns:

a. If a company claims to have no indirect costs, this suggests to ATP that the company is inexperienced in its fiscal affairs, the company may not be a financially viable business, or the company has no intention of carrying on any business other than performing research for the ATP project. On this latter point, ATP will not pay for commercialization activities in which the company may engage during the project to earn revenues, or to solicit investors.

b. ATP projects are industry/government, cost-shared projects. A company proposing to recover 100 percent of the project costs from

ATP is not complying with the spirit of the ATP statute because the company has no funds of its own at risk. In addition, if the company is not sharing in the risk of the investment with ATP, it gives the appearance that it is not very committed to moving the technology into the marketplace. Therefore, a proposal claiming no indirect costs is unlikely to receive an ATP award.

### **5. I am a small startup company and expect to cost share direct costs through the use of state or other private investors. If those resources fall through after I receive an ATP award, will I be expected to make up the cost-share gap?**

Yes. If a single-company or joint venture proposal is selected for funding, the recipient's percentage of cost sharing will be made a part of the cooperative agreement award, and will become a mandatory requirement. NIST cannot violate the ATP statutory cost-sharing requirements.

### **6. Can independent research and development (IR&D) funds be used as cost sharing?**

The fundamental expectation for cost sharing is that the proposer's share of the ATP project costs will be funded from nonfederal sources, such as retained earnings or profits, not funds included as an indirect expense that is subsequently allocated for reimbursement under federally funded procurement contracts, grants, and other agreements. Recovering the proposer's cost share as part of its IR&D/General and Administrative (G&A) allocation to other federally funded projects would be contrary to the kind of financial commitment expected of proposers by the ATP statute.

Proposers MAY NOT classify the nonfederal share of the ATP project costs as an IR&D expense that is subsequently allocated, either as a separate cost or as an element of a G&A cost pool, to federally funded procurement contracts, grants, or other agreements.

Proposers MAY allocate to an ATP project IR&D or G&A costs that include IR&D as an element provided that the IR&D/G&A rate applied to the ATP project is a federally approved indirect cost rate.

## **F. INTELLECTUAL PROPERTY**

### **1. Who retains title to patentable inventions arising from an ATP-funded project?**

Title to any inventions arising from an ATP-funded project must be held by a for-profit company, or companies, incorporated or organized in the United States. A university, government laboratory, independent research organization, or other nonprofit organization cannot retain title to patents, although such organizations can receive mutually agreeable payments (either one-time or continuing) from the company or companies holding title to the patent. However, a for-profit corporation organized by a university can be considered a for-profit company for the purpose of retaining title to patents arising from an ATP award. In such a case, documentation of the for-profit status must be provided in the proposal. If your organization is not a for-profit company but plans to be involved in an ATP project, you will not be able to retain title to any patentable inventions arising from the ATP project. Please make sure your legal department is aware that ATP cannot waive this mandated provision (15 U.S.C. § 278n(d)(11)(A) and 15 C.F.R. § 295.2 and 295.8). Title to any such invention shall not be transferred or passed, except to a for-profit company organized in the United States, until the expiration of the first patent obtained in connection with such invention.

### **2. Can a U.S. for-profit company share ATP intellectual property ownership with a nonprofit or non-U.S. company?**

No; it would be contrary to the ATP statute.

### **3. Does the federal government have any rights to patentable inventions arising from an ATP-funded project?**

Yes. The United States reserves a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any patentable invention arising from an ATP award. The federal government shall not, however, in the exercise of such license, publicly disclose proprietary information related to the license. The federal government also has march-in rights in accordance with 15 C.F.R. § 295.8. Since its inception in 1990, ATP has not exercised either of these rights.

## **G. HUMAN AND ANIMAL SUBJECTS**

### **1. Will ATP fund projects involving human and animal subjects?**

Yes, provided the research involving human or animal subjects is in compliance with applicable federal regulations and NIST policies for the protection of human or animal subjects. Human subjects research involves interactions with live human subjects or the use of data, images, tissue, and/or cells/cell lines (including those used for control purposes) from human subjects. Research involving human subjects may include activities such as the use of image and/or audio recording of the people, taking surveys or using survey data, using databases containing personal information, testing software with volunteers, and many tasks beyond those within traditional biomedical research.

Vertebrate animal research involves live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals or for teaching or testing. The regulations do not apply to animal tissues purchased from commercial processors or tissue banks or to uses of preexisting images of animals (e.g., a wildlife documentary or pictures of animals in newscasts). The regulations do apply to any animals that are housed and cared for by a project participant and used for custom collection of biological samples or observation data of health and behavior.

## **2. Does ATP have any written guidance to help me determine what documentation is required if my project involves human and/or animal subjects?**

Yes, and it is critical that you review this guidance. ATP has prepared detailed guidance in the *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*, to help you determine what documentation is required if your research plan contains studies using human subjects, human materials, or animal subjects. This booklet is available at <http://www.atp.nist.gov/atp/helpful.htm> or it can be mailed to you by calling 1-800-287-3863 and requesting a copy. You are also encouraged to call the ATP Human & Animal Subjects Advisor for assistance at 301-975-8779.

## **3. We are not a biotech company. Does our research involve human subjects?**

It could. For example, a computer software company may propose to have a new web-based curriculum reviewed by a group of volunteers and solicit feedback on such things as usability, design, and content. The use of volunteers to review the web-based system (or the curriculum in a software format) may constitute the use of human subjects as defined by federal regulations. Manufacturing, electronic, and information technology projects may use human subjects in research that falls within the regulations. The use of human subjects is not limited to biologically based studies; there are numerous examples of non-medical research proposals that may use human subjects or data with personal information about people. Any use of human subjects requires careful review to determine if and how the regulations apply and may require the submission of certain documents to NIST. A Human Subjects Determination Checklist is included in this Proposal Preparation Kit as **Exhibit 2** to assist you in determining whether your proposed research plan has human subjects involvement, which would require additional documents with your proposal submission, and more documentation if your proposal is selected as a

semifinalist. See the *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects* for more specific information on documentation requirements and due dates for documentation.

Examples of human subjects in research activities, that may require the submission of certain documents to NIST, include, but are not limited to, using human subjects:

- a. to test software, recording (audio or visual) methods, equipment, therapeutic methods or materials,
- b. to collect data about human subjects through direct interviews, written surveys, or online interactive methods, etc., or
- c. to observe people and their behavior in specified circumstances controlled by the research team.

## **H. AWARD REQUIREMENTS**

### **1. If my proposal is selected for funding, what terms and conditions must I follow?**

The award terms and conditions and cooperative agreement award form are available at <http://www.atp.nist.gov/atp/helpful.htm>.

### **2. How will I receive funds if my proposal is selected for funding?**

Funds are disbursed via electronic funds transfers using the Department of Treasury's Automated Standard Application for Payment (ASAP) system. Details are available at <http://www.atp.nist.gov/atp/helpful.htm>.



## CHAPTER 2

### Proposal Format and Submission Requirements

**NOTE: Proposals that deviate substantially from these guidelines or that omit required information may be found unresponsive and may not be considered for funding.**

#### A. PROPOSAL FORMAT

- 1. Bindings.** Bind all (including signed original) but one copy of the proposal securely. Bindings that permit the proposal to lie flat while being read are preferred. Loose-leaf ring binders or stapled copies are not acceptable.
- 2. Double-sided copy.** Print on both sides of the paper (front to back counts as two pages).
- 3. E-mail proposal submissions.** Will not be accepted.
- 4. Facsimile (fax) proposal submissions.** Will not be accepted.
- 5. Figures, graphs, and images.** Should be of a size that is easily readable or viewable.
- 6. Font.** Times New Roman or Arial and readable (12-point minimum).
- 7. Line spacing.** Single.
- 8. Margins.** One (1) inch top, bottom, left, and right.
- 9. Number of copies if submitting by paper rather than electronically.** Sixteen (16) (1 original, signed, bound proposal plus 15 copies [1 unbound and 14 bound]). If the original proposal is in color, all copies must also be in color. If the proposal is submitted electronically, paper copies are not required.

**10. Page limit.** 40 pages for a single company; 60 pages for a joint venture. See Exhibit 1 for more details.

**11. Page numbering.** Number pages sequentially.

**12. Paper size.** 21.6 by 27.9 centimeters (8 1/2 by 11 inches).

**13. Proposal language.** English.

**14. Table of contents.** Not required.

**15. Typed document.** All proposals, including forms, must be typed; handwritten proposals and forms will not be accepted.

#### B. ELECTRONIC PROPOSAL SUBMISSION

During open competitions, ATP encourages proposers to submit proposals electronically over the Internet via Grants.gov (<http://www.grants.gov>). General instructions for submitting ATP proposals electronically via Grants.gov are included in this Proposal Preparation Kit as Exhibit 3.

The due date for submission of electronic proposals is stipulated in the competition announcement (solicitation/request for proposals), which is posted on the ATP website (<http://www.atp.nist.gov>). Do not wait until the last minute to submit a proposal electronically. ATP will not make any allowances for submission delays due to incomplete Grants.gov registration.

## C. PROPOSAL FORMS AND OTHER REQUIRED DOCUMENTS

*(Forms are included in this Proposal Preparation Kit as exhibits and are posted on the ATP website at <http://www.atp.nist.gov/atp/helpful.htm>. See Exhibit 1 for a checklist on the required order of these documents for submission.)*

### 1. Single Company Only

a. **Form NIST-1262 (all four pages): Single-Company Advanced Technology Program Proposal Cover Sheet** (see Exhibit 4). Page 1 of this form serves as the cover for the proposal; no other cover page should be included.

b. Plus items in Section 3. below.

### 2. Joint Venture Only

a. **Form NIST-1263 (all five pages): Joint Venture Advanced Technology Program Proposal Cover Sheet** (see Exhibit 5). Page 1 of this form serves as the cover for the proposal; no other cover page should be included.

b. **Joint Venture Agreement (JVA)**—A credible draft JVA is required if a proposal is selected as a semifinalist, which must be initialed by each joint venture participant acknowledging review and preliminary concurrence. The information below is provided in advance to alert joint venture participants of the minimum requirements so that the parties may begin negotiating the JVA early:

(1) Authorization for one of the joint venture participants (a legal entity, not an individual person) to serve as the Joint Venture Administrator to bind all of the other participants to the terms and conditions of the NIST/ATP award and to administer the NIST/ATP award on behalf of all of the participants.

(2) Treatment of intellectual property—that is, who will own what, including provisions granting the required licenses to the government.

(3) Agreement that the ATP award terms and conditions take priority over those in the JVA.

(4) Acknowledgment of the parties of their respective cost-sharing commitment and that no party is responsible for the cost-sharing commitment of any other party.

(5) Acknowledgment that if a party is removed unilaterally by the NIST Grants Officer, that party is also removed from the Joint Venture Agreement.

Although the draft JVA only requires initials by each joint venture participant at the time of submission, it must be finalized and signed by all joint venture participants before an award can be made. Failure to provide an acceptable, executed JVA by the established due date will jeopardize issuance of an award. An award will not be deferred to give more time to finalize a JVA. A sample JVA and Intellectual Property Plan is available on the ATP website (<http://www.atp.nist.gov/atp/helpful.htm>). The sample JVA includes important information; however, it is not meant to be the sole JVA model. If a joint venture wants to develop its own JVA, it may do so, provided the minimum provisions mentioned above are included, and provided that the alternative JVA does not otherwise conflict with ATP requirements. A draft JVA that has not been completed to include the required information will not be accepted. Legal name and contact information of each JV participant must be provided; include only those organizations to be bound by the JVA.

Some issues that are most often raised by company legal counsel in negotiating the JVA include the following:

(1) Who will hold title to intellectual property?

- (2) How are revenue streams to be divided?
- (3) What indemnification provisions will be acceptable to all parties?
- (4) Who will be the spokesperson for the joint venture?
- (5) Who authorizes licensing agreements?
- (6) Who handles the billing to NIST and brings issues to NIST's attention?
- (7) What will happen during the course of the project if one party drops out and/or another party wishes to join?
- (8) Who will coordinate writing the quarterly reports to be submitted to NIST/ATP?
- (9) Who will track progress against technical milestones to bring issues to the attention of the joint venture and NIST/ATP?
- (10) In what capacity is a government laboratory participating? If as a joint venture partner, is the government laboratory willing to execute the JVA? (NOTE: If it is not willing to execute the JVA, the government laboratory may possibly participate as a subcontractor under a separate agreement [e.g., a CRADA as addressed in Chapter 1, Section B.8] with the Joint Venture Administrator.)
- (11) How will disputes be handled should they arise?
- (12) How will project expenses be reported by joint venture participants to the Joint Venture Administrator for reporting to NIST?
- (13) Will the joint venture participants be required/need to share commercialization strategies? If yes, at what level of detail to succeed?

Before investing a large effort in planning technical work for a joint venture, companies are urged to obtain a legal review of the sample JVA by all participants. If it appears

likely that reaching an agreement to the provisions contained in the sample JVA and Intellectual Property Plan will be contentious, ATP urges you to carefully consider whether the joint venture is feasible. If there are questions, your legal staff may contact the Office of the NIST Counsel at 301-975-2803.

ATP strongly recommends that the person who signs the proposal submission be someone at a high enough level in the company to be able to deal effectively with the kinds of legal and policy concerns that are necessary to execute a successful JVA. It is often helpful if this same individual is the authorized signer of the JVA on behalf of the lead company if the project is selected for funding. This individual must coordinate with top management within his/her own company and participating companies/organizations about their commitment and proposed cost-share contribution to the proposed project.

### 3. Both Single Company and Joint Venture

a. **SF-424 (R&R) (2 pages), Application for Federal Assistance** (see Exhibit 6). Note that there are multiple versions of the SF-424, therefore, be sure to use the SF-424 (R&R) version.

b. **Research and Related Other Project Information** (see Exhibit 7).

c. **Budget Narrative** (see Exhibit 8). The Budget Narrative is used by technical, business, and grants staff to determine reasonableness and allowability of costs in an ATP proposal. Proposed costs must be reasonable, allocable, and allowable in accordance with applicable federal cost principles and ATP guidelines.

ATP recognizes that unexpected events may occur in R&D projects and that budgets may need to be changed as a project proceeds. Providing a multi-year budget beyond the first year may not lock the proposal into all of the details. ATP allows a certain amount of flexibility in moving funds from one line item



to another as circumstances change. In stating an amount for a given task, you will not be required to spend precisely that amount on that task. For example, if, in the second or third year of your project, you find that you need to spend more on one task and less on another than anticipated, that can be accommodated as long as you obtain the required prior approval from the NIST Grants Officer. A task that proves unnecessary can be deleted and a new task can be defined if there is adequate justification that such changes will enhance the chances of accomplishing the objectives of the project and the spirit of the original proposal objective is maintained.

Recognizing that change is inevitable, recipients may be requested to submit a revised budget prior to the beginning of each

year of a multi-year project. However, the total amount provided by ATP for the project cannot be increased and cost-share commitments must be honored. You will not be reimbursed for project overruns. Overestimating or underestimating project costs should be avoided. The dollar amount requested must be commensurate with the defined tasks, as ATP will evaluate for cost reasonableness.

e. **Table of abbreviations.** Include a table that defines abbreviations likely to be unfamiliar to the reader. Common abbreviations, for example, U.S., ATP, DoD, and cm, need not be defined.

## CHAPTER 3

# Guidelines for Preparing Project Narrative and Required Letters

*The following is a detailed discussion of the key information needed in the Project Narrative for assessing the quality of the proposal against the ATP selection criteria. While the format below is not required, to be competitive a proposal must address all of the components of both criteria. ATP reviewers are familiar with the technology and industry discussed in the proposal; however, the reviewers use only what is written in the proposal to evaluate the project against the ATP selection criteria. There is a page limit of 40 pages for a single company and 60 pages for a joint venture. Typically a proposal has an equal number of pages to address each of the two selection criteria, i.e., the Scientific and Technological Merit selection criterion and the Potential for Broad-Based Economic Benefits selection criterion.*

**NOTE:** ATP does not pay for product development. Product development includes incremental or routine enhancement of existing products or processes. Product development also includes straightforward applications of existing technology or technologies in new prototypes or products. See Chapter 1, Section D. for more details on all ineligible projects and costs.

### **A. EXECUTIVE SUMMARY (no more than two pages)**

An Executive Summary briefly highlighting the major sections of the Project Narrative must be included in the proposal. This Executive Summary may not exceed two pages and is not included in the proposal page limit. The Executive Summary should address the ATP selection criteria as follows:

1. Scientific and Technological Merit

- a. Technical Innovation
- b. Technical Risk With Evidence of Scientific Feasibility
- c. Technical Plan

### 2. Potential for Broad-Based Economic Benefits

- a. National Economic Benefits
- b. Need for ATP Funding
- c. Pathway to Economic Benefits

In the Executive Summary, explicitly link the technical objectives, the eventual planned commercial application of the technology, and the expected economic benefits so that the path from the technical objectives to the benefits is clear.

## **B. SCIENTIFIC AND TECHNOLOGICAL MERIT PROJECT NARRATIVE**

This narrative includes the detailed information that must be provided to address the scientific and technological merit selection criterion. The proposal should also include a list of bibliographic technical references. This list is not included in the page limit of the proposal.

The scientific and technological merit selection criterion has three key components:

1. Technical innovation,
2. Technical risk with evidence of scientific feasibility, and
3. Technical plan.

All three components must be addressed successfully and in detail for a proposal to pass this selection criterion. The proposal must clearly describe how the proposed technology and/or the technical approach are highly

innovative. The proposal must also clearly describe the high risk technical challenges that make success in carrying out this research uncertain, and the sound scientific rationale for overcoming these risks. The research must be aimed at overcoming an important problem(s) or exploiting a promising opportunity. The research must have strong potential for significantly advancing the state of the art and contributing to the U.S. scientific and technical knowledge base. The technical plan must be well thought out, documenting the approach to carrying out the project by addressing the questions of “what, how, where, when, why, and by whom” in substantial detail. The project team must be qualified to conduct the R&D, and the proposal must explain how the necessary facilities for the research will be obtained.

Although ATP technical reviewers are experts familiar with many technologies, the reviewers will only have what is written in the proposal to evaluate the project. Competitive proposals must include significant company confidential/proprietary information. ATP takes protection of that proprietary information very seriously. ATP screens reviewers for conflicts of interest and requires reviewers to sign nondisclosure agreements. In addition, proposals are securely stored and tracked to further ensure that company confidential/proprietary information is protected. Company confidential/proprietary information (both technical and business-related) in a proposal is fully exempt from disclosure under the Freedom of Information Act (FOIA). (See Chapter 1, Section A.6. for more information on this point.)

The scientific and technological merit project narrative portion follows the Executive Summary. It is a good practice to include in the Executive Summary an overview describing the technical problem and why others have not solved it. This introduction can describe the technical problem faced by industry and the context for the innovation and/or the technical barriers that limit economic growth in the industry and prevent the problem from being solved.

Diagrams, flowcharts, and tabulated summaries are good tools to help communicate the innovation, risk, and technical plan for the proposed project. All diagrams, flowcharts, pictures, tables, and other illustrations are included in the page limit. Where such tools are used to communicate information, these aids must use a legible font (preferably no smaller than 8 point, 10 point is preferred).

**1. Technical Innovation**—To be competitive in this component of the scientific and technological merit criterion, the proposal must convince expert reviewers that the project involves a high level of technical innovation. ATP defines innovation as providing a unique approach to developing new-to-the-world prototypes of products or processes. The proposed innovation may relate to the objectives of the research, as long as reaching those objectives requires a significant technical advancement beyond current practice, or to the approach to achieving those objectives, or both; innovation may be in what is to be accomplished as well as in how it will be accomplished. The innovative approach can be completely novel or a novel integration of existing or new technologies. ATP looks for technical innovation that is revolutionary, not an incremental or evolutionary next step for existing technology.

In a project for which a significant portion of the work is the integration of existing technologies, ATP looks for the creation of new knowledge concerning the process of integration (e.g., a new integration methodology) or new understanding of the underlying technologies that will provide a technical advance for enabling future integration efforts (i.e., making such efforts better, faster and/or cheaper the next time). Integration using standard methods on existing technologies is not likely to be competitive. Novelty of the end product alone does not constitute technical innovation if the predominant research approach is based on using standard integration methods on existing technologies.

For ATP, technical innovation should be disruptive (revolutionary) with respect to the state-of-the-art. The proposal must address the following in detail in order to be competitive:

**a. Technical Barriers**—Describe the technical barriers that prevent significant technical advances by the industry. Identify, where known, the efforts by others to overcome the barriers and why success may not have been achieved or was limited. Discuss why the proposed solution has not previously been attempted or accomplished.

**b. Proposed Solution/Technical Objectives**—Describe the proposed solution to the identified problem and describe why it is innovative. For projects involving the development of a prototype, provide schematics of the envisioned system, system

diagrams, or system architecture as appropriate. Make clear how the proposed innovative solution will overcome the technical barriers.

**c. Technical Targets**—Identify the measurable success criteria for the proposed technology development efforts. Provide quantifiable measures. These measures should be explained and contrasted against those for the state-of-the-art.

**d. Key Factors Chart**—In a table, summarize the key technical factors (or variables) associated with the approach, the proposed quantitative targets for those factors, the minimum requirements for commercial success for those factors, current practice, associated technical barriers to reaching the targets, and the innovative approaches (see Table 1).

**Table 1: Key Factors (Example)**

| Key Factors  | Proposed Technical Targets   | Requirement for Commercial Success   | Current Practice   | Associated Technical Barriers                                | Innovative Technical Approaches        |
|--|--|--|--|--|--|
| Oxygen permeability of thin polymer film containing carbon nanotubes | 10 <sup>-5</sup> mL per m <sup>2</sup> per mil per day at 25 0°, 1 atm, 90% RH | 10 <sup>-2</sup> mL per m <sup>2</sup> per mil per day at 25 0°, 1 atm, 90% RH | 10 <sup>-1</sup> mL per m <sup>2</sup> per mil per day at 25 0°, 1 atm, 90% RH | Loss of oxygen barrier properties at high humidity           | New composite extrudable materials     |
| Percent of speech recognized   | 99.9%  | 99%  | 70%  | Range of accents   | New approach to recognizing inflection |
| Noninvasive glucose sensor   | 50% improvement in accuracy and precision over current method metrics          | 25% improvement in accuracy and precision over current method metrics          | Invasive in vivo methods   | Calibration and reliability                                  | Noninvasive in vivo device             |
| Integration of X and Y components                                    | Combined performance is a 200% improvement over current separate usage         | Combined performance is a 100% improvement over current separate usage         | Component X and Component Y are completely independent in operation            | Lack of compatible infrastructure to support both components | Create a new type of infrastructure    |

**e. Technical Competitors**—Describe how the proposed solution is particularly innovative relative to alternative approaches being pursued by foreign and domestic competitors or elsewhere within the proposing team’s organization(s). Cite relevant patents

and the open literature to support this discussion. Ignoring state-of-the-art knowledge and ongoing work by others and within the proposing team’s organization(s) may lead reviewers to assume that the proposer is not aware of existing work.

Identifying existing efforts helps to ensure that the proposed work does not duplicate these efforts. Discuss the expected state of the proposed technology at the end of the ATP project relative to competitors' expected capabilities at that time, if the project is successful.

**f. Impact on the U.S. Knowledge**

**Base/Technical Leverage**—Successfully accomplishing the proposed research and surmounting the technical challenges should result in a dramatic change in the future direction and state of the technology. This “path change” should be a major leap forward, advancing the state-of-the-art significantly. Summarize the impact, or technical leverage, of successfully accomplishing the proposed research and overcoming the high technical risks. Technical leverage is the possibility of using the research results or approach beyond the initial applications or industries proposed. Describe the potential usefulness and benefits of partial success or knowledge gained from a project even if it is not completely successful.

**2. Technical Risk with Evidence of Scientific Feasibility**—To be competitive in this component of the Scientific and Technological Merit Criterion, the proposal

must address high technical risk in the context of clear evidence of a technically sound, scientifically feasible approach to manage and overcome the risk.

**a. Technical Risk**—ATP funds projects that seek to overcome extremely difficult technical challenges where the level of risk involved makes full or even partial technical success uncertain. A competitive proposal must clearly describe where the high technical risk challenges are that must be overcome for the project to succeed. In general, risk is associated with the probability of a desired or sought-after outcome (e.g., approach, process, etc.) being adverse or undesirable. High risk therefore means a significant probability of an unfavorable outcome. Success would be clearly recognized by experts in the field as an uncertain outcome. Table 2 defines technical risk that may be competitive and, conversely, descriptions of technical risk that are unlikely to be competitive. One or more of the elements of high technical risk, as defined in the Table, are typically present to a significant extent in a competitive proposal. ATP recognizes that not every goal or task in a technical plan has high technical risk; however, a project must have a profile of high technical risk overall.

**Table 2: Competitive and Noncompetitive Technical Risk for an ATP Project**

| Technical Risk that is Likely to be Competitive  | Technical Risk that is Unlikely to be Competitive   |
|--|---|
| Difficult technical hurdles that require innovative new technical approaches or solutions, and whose success is uncertain                  | Product development (this is typically incremental in nature) and/or straightforward improvements   |
| Probability that an adverse outcome associated with an innovative approach, solution or goal is more likely than a successful outcome      | Demonstrating acceptance of a new technology in the marketplace (ATP considers this to be market risk)  |
| Integration of disparate technologies in new and unobvious ways that substantially extend the state-of-the-art                             | Routine data generation, gathering and analysis; scale-up of a prototype or a process, unless there are new innovations required to reach the necessary scale |
| Significant new innovation(s), combined with Integration of disparate technologies, which together may constitute still further innovation | Research projects whose technical risk arises from a Lack of clear research focus or a lack of scientific capabilities or a lack of funds                     |
| Research that is targeted, bounded and critical to an underlying innovative methodology development.                                       | Basic discovery science with unbounded targets and/or using standard scientific approaches that will not lead to new methodologies or practices.              |

*NOTE: For a competitive proposal, the detailed scientific rationale for why the proposed research is high risk must be provided.*

Many proposals are not competitive because the proposal does not provide a sufficiently detailed scientific rationale to document the specific high technical risks embodied in the proposed research, or the proposal cites only routine risks common to all technology development efforts in a field. To address this criterion, proposers must describe the technical challenges and assess the probability of success of the project's approach(es).

Characterize the major technical tasks with respect to technical risk (including those performed by subcontractors) by risk level (high, medium or low). Identify and analyze the high-risk tasks and clearly state how the risk will be monitored against metrics and managed. Describe known related efforts that may have been unsuccessful, and how your approach avoids or manages the pitfalls others may have fallen into. ATP expects significant involvement of the proposing organization in overcoming the high technical risk challenges.

Risk may be high in the successful development of one or more single innovations, the integration of disparate technologies, or both. Integration risk can be due to the complexity of the integration effort, unknown properties of the components to be integrated, or other factors. Critical to an explanation of high risk for integration efforts is explaining what new knowledge to overcome the risks, whether it is in the integration approach or in the technologies to be integrated, is needed to make this integration possible. The high cost of an integration effort does not sufficiently justify a claim of high technical risk. Some high cost, complex integration efforts may only actually require standard approaches and existing technologies, making them less competitive against the ATP criteria.

Surmounting the technical challenges should result in a dramatic change in the future direction of the technology. The technical risks cited should be recognizable and credible to an expert in the field. In the project's Gantt

Chart (see Table 6), characterize the level of technical risk associated with each task (high, medium or low). (Note: ATP does not consider marketplace acceptance to be a technical risk. In addition, the level of risk should be sufficient such that it precludes private funding sources of investment capital.)

**b. Evidence of Scientific Feasibility**—To be competitive proposals must document that the approach and the metrics used to manage risk are based on sound underlying science. The consistent application of sound underlying scientific and/or engineering principles indicates that the approach could be successful.

To adequately address this element of the technical criterion, proposers must provide evidence that the approach toward overcoming high technical risk has a sound scientific and/or engineering basis. Evidence of scientific feasibility does NOT mean that the approach is more of a “sure thing”, of lower technical risk, already prototyped or piloted, or that it has a higher probability of success in being accomplished. Evidence of scientific feasibility DOES mean that the approach is based on: a) meritorious scientific principles and/or, b) preliminary data/analysis that would be generally recognized as not in violation of well established scientific and/or engineering principles or contradictory to a significant body of archival published evidence (e.g., doesn't violate the second law of thermodynamics).

Preliminary experimental and/or computational results are *not* required if the basis of the approach is supported with references by the open scientific or patent literature. However, an approach that appears to be contrary to established scientific principles or a significant body of archival published evidence is not likely to be competitive, *unless* specific experimental evidence can be supplied that credibly challenges what is currently viewed as generally accepted meritorious science. Table 3 summarizes what ATP means by scientific feasibility of high risk technical approaches.

**Table 3: Competitive and Noncompetitive Evidence of Scientific Feasibility for an ATP Project**

| Evidence of Scientific Feasibility that is Likely to be Competitive Relative to the ATP mission  | Evidence of Scientific Feasibility that is Likely to be Noncompetitive Relative to the ATP Mission |
|--|--|
| Actual <u>preliminary</u> experimental and/or computational results that demonstrate early proof-of-concept  | Unsupported, unexplained assertions that a project or approach is feasible                         |
| Results/citations drawn from the open scientific and/or patent literature that lend support to the technical approach or solution proposed to overcome high risk hurdles | Unsupported challenges to established laws, principles or theories of science or engineering       |

*NOTE: For a competitive proposal, the scientific rationale underlying the evidence for scientific feasibility must be provided.*

**3. Technical Plan**—To be competitive in this component of the scientific and technological merit criterion, the technical plan must explain how the technical objectives will be reached. It should address any anticipated technical problems and describe how these problems will be handled. ATP has only the written technical plan to evaluate how the proposed results will be achieved. Many proposals are not competitive because, although the meritorious technical goals are emphasized, the proposal provides only a vague or unfocused plan on how to reach those goals (i.e., “milestone X is complete when we run out of Y dollars”). It is not sufficient merely to describe the established technical barriers and provide only an overview of the research path using standard scientific or engineering methods. ATP requires a more detailed technical plan to evaluate how the goals will be met.

For a proposal to be competitive, ATP must be able to track the project from initial idea to the proposed end results. The project proposal will provide the basis for project management should ATP issue an award. A detailed technical plan is, therefore, critical for effective project management, for development of a reasonable budget, and for good communications between the ATP Project Manager and the project Principal Investigator. The proposal must address the “what, how, where, when, why,

and by whom” in order substantial detail. Including the following project planning concepts is encouraged. Competitive technical plans address the following:

**a. Technical Approach**—For a proposal to be competitive, the elements of the technical plan must fit together in a reasonable and logical way to instill confidence that the proposing team can implement and conduct the proposed approach. The following technical plan sub-elements are needed:

**(1) Tasks and Subtasks**—Discuss how the work will be organized into tasks and subtasks. Provide clear descriptions. Include tasks and subtasks performed by subcontractors and clearly identify these subcontractors if known at the time of proposal submission. If the subcontractor is not known, provide the qualifications needed to perform the proposed subcontract work. Explain the technical rationale for the major tasks. Indicate the level of risk of each task (e.g., high, medium, low). Clearly link tasks to the budget and to the subcontracts (where appropriate). Highlight major risks and innovations inherent in specific tasks and the strategies for managing unexpected results. If appropriate, discuss any contingency plans or alternative technical approaches for carrying out key portions of the technical work. Highlight the level of risk and innovation inherent in the alternatives and compare them to the preferred approach. ATP may not accept



alternatives that significantly change the technical risk, scientific feasibility, or level of innovation.

**(2) Interrelationship of Tasks**—Discuss how the tasks link to one another, which tasks depend on others, which tasks are sequential, and which tasks would be done in parallel. If contingency plans are used in the event the primary approach is unsuccessful, describe how these tasks will be incorporated, and under what conditions. Describe the metrics used to decide to move to an alternative approach.

**(3) Metrics**—Provide clear and concrete metrics for measuring the project’s progress toward the overall technical goals. Define what technical success would look like, i.e., these metrics should be quantitative and

objective and should relate to the project’s technical objectives, targets, and success criteria. Quantify the extent to which this advances the current state of the technology. Metrics used at decision points to decide on proposed next steps are critical.

**(4) Milestones**—Provide appropriate interim and final key milestones for each year of the technical plan and tie these to the metrics. Identify the organization responsible for or with a key contribution to each milestone. Milestones are critical for tracking progress made in the project. Include a discussion of the strategy for validating that a critical milestone’s metrics have been met. An example showing the linkage between milestones, metrics, and timing is provided in Table 4.

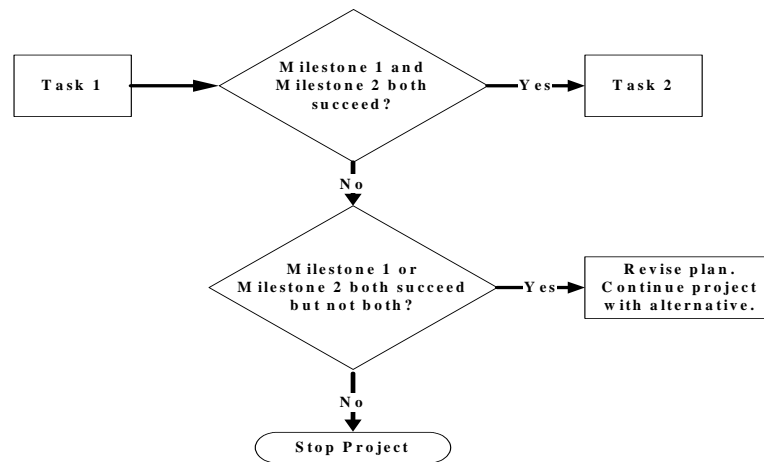
**Table 4: Key Milestone (Example)**

| Milestone   | Timing                          | Responsible Organization          | Metric  | Minimum Value for Successful Result   | Test Method  | Decision   |
|---|---------------------------------|-----------------------------------|---|---|--|--|
| Handwriting Recognition   | End year 1                      | Company XYZ                       | Percent of written input recognized   | 80%   | Use of dataset: NIST hand-printed forms and characters                                 | Continue with approach or switch to alternative  |
| Material Downselection  | 2 <sup>nd</sup> year, quarter 1 | Company ABC                       | Figure of merit for performance   | Exceeds current technology by 200%  | Series of evaluation methods   | Choose optimal performance or restructure  |
| Matrix to support cell attachment, spreading and cell ingrowth timing (for Engineered Rotator Cuff)                   | Month 15                        | Subcontractor                     | Timing for cell attachment and spreading throughout the matrix  | Uniform cell attachment within 5 minutes of seeding and spreading within 30 minutes at all levels of modular matrix                                   | Use of RGD covalent coupling to enhance rates of cell attachment and support spreading | If coupling is not even throughout matrix, move from static to perfusion coupling to ensure reagent matrix contact   |
| Demonstrate functionality of candidate sensor tips  | First year, quarter 2           | Subcontractor 1                   | Figure of merit based on performance standards  | Sensitivity, spatial resolution, and power consumption within 70% of final targets  | Verified test methods  | Select superior candidate tip or re-evaluate technical approach  |
| Integrate and demonstrate catalyst synthesis, probe reaction, miniaturized analytical methods, and informatics system | End Year 3                      | Company 1 (JV Lead) and Company 2 | Generate 2 new candidate lead compounds for lab-scale tests using process-grade raw material feedstocks | Candidate compounds must show: a) 15% improvement in reaction yield at reduced reaction temperatures and b) 50% higher selectivity in probe reactions | High throughput synthesis and analysis techniques                                      | Explore different region of chemical composition space if lead compounds don’t meet minimum requirements for success |

**(5) Decision-Point Strategy**—Provide go/no-go and other decision points for the project as appropriate. High risk research can fail. Well defined decision points provide a roadmap in terms of milestones and metrics of when it is clear in a validated, quantifiable way that a project or line of research has succeeded or failed. For example, if a new material passes a stress test at a milestone, the decision is clearly to continue. If it fails the stress test at that milestone by a significant amount then the project may recommend a designated alternative approach. If the designated alternative fails, then the project may define this as a no-go point that terminates the

project. Projects that pursue more than one technical approach in parallel must discuss how the decision to select among those approaches will be made and when it will be made in the decision-point strategy. A good decision-point strategy identifies early go/no-go decision points within the first 12-18 months of a project. Risks, milestones, metrics, and decision points must be linked in the decision-point strategy. A decision-point tree or critical-path chart may be very helpful to communicate this information. One example of a decision-point strategy is given in Table 5. There are many other ways to effectively portray the information.

**Table 5: Decision-Point Strategy (Example)**



**(6) Gantt Chart**—Include a Gantt chart or other project timeline tool that illustrates timing of major tasks and key subtasks. Additional information that is helpful to summarize on the timeline, include: the level of risk of each task, performers, milestones, and decision points, as appropriate. The timeline chart acts as a critical “task map” of your technical plan for reviewers and for the overall project if it selected for funding. It illustrates how well you have thought through your technical approach at the level of detail that has

consistently been a part of competitive ATP proposals. Noncompetitive proposals typically do not provide this level of detail. Performers are key personnel leading tasks and subtasks, and can be subcontractors, joint venture partners, or other team members. Indicate who will lead which task (see Table 6). In addition to the timeline chart, the project tasks must be described in narrative form. It must be clear how the goals of the project will be achieved by those tasks.

**Table 6: Gantt Chart (Example)**

| Tasks       | Q 1 | Q 2 | Q 3 | Q 4 | Q 5 | Q 6 | Q 7 | Q 8 | Q 9  | Q 10 | Q 11 | Q 12 | Performers      | Level of Risk | Major Milestones, Metrics, and Decision Points  |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-----------------|---------------|---|
| 1.0 Task    | --- | --- | --  | --  | --  |     |     |     |      |      |      |      | Smith           | High          |   |
| 1.1 Subtask | --- | M1  |     |     |     |     |     |     |      |      |      |      | Subcontractor A | High          | M1: Measure X must be greater than Y  |
| 1.2 Subtask |     | --- | M2  |     |     |     |     |     |      |      |      |      | Jones           | Medium        | M2: Material property P must be at least Z  |
| 1.3 Subtask |     | --- | --  | M3  |     |     |     |     |      |      |      |      | Ahmed           | High          | M3: Test specific feature using described test plan<br>Decision: If the test fails then use designated alternative      |
| 1.4 Subtask |     |     | --  | --  | M4  |     |     |     |      |      |      |      | Wang            | High          | M4: Performance metric must exceed threshold<br>Decision: If performance metric is not achieved, then terminate project |
| 2.0 Task    |     |     |     | --  | --  | --  | --  |     |      |      |      |      | Wilson          | Low           |   |
| 2.1 Subtask |     |     |     | --  | M5  |     |     |     |      |      |      |      | Todd            | Low           | M5: Component must be assembled   |
| 2.2 Subtask |     |     |     | --  | M6  |     |     |     |      |      |      |      | Jones           | Low           | M6: Component must be assembled   |
| 2.3 Subtask |     |     |     |     |     | --  | M7  |     |      |      |      |      | Taylor          | Low           | M7: Complete initial prototype  |
| 3.0 Task    |     |     |     |     |     |     | --  | --  | --   | ---- | ---- | ---- | Wang            | High          |   |
| 3.1 Subtask |     |     |     |     |     |     | --  | --  | --   | M8   |      |      | Ahmed           | Medium        | M8: Test system on specified dataset  |
| 3.2 Subtask |     |     |     |     |     |     |     | --  | ---- | ---- | M9   |      | Subcontractor B | High          | M9: Complete final test scenario  |

**b. Technical Experience and Qualifications**—Provide information about the key technical team members. Most projects require a multidisciplinary approach to overcome technical barriers. Describe the quality and appropriateness of the technical staff assigned to the project, and the amount of time each individual will allocate to the project. Briefly highlight the educational background and experience of key personnel, including subcontractors. Describe how the necessary scientific, engineering and business knowledge will be made available if not on the current project team. If a proposal is selected as a semifinalist, ATP may request two-page resumes from each key team member. If key staff will be hired, describe the qualifications needed for key positions not yet filled and the timeline for hiring these staff.

**c. Adequacy of Facilities, Equipment, and Resources**—Briefly, discuss the research facilities and specialized equipment required. Identify what facilities, equipment, and resources already exist for use; what will be obtained through subcontracting; and what must be obtained even though sources are not yet identified. Provide the timeline for obtaining needed facilities, equipment, and resources. Major equipment purchases need to be clearly linked to the appropriate research tasks.

**d. Subcontracts**—Many projects include subcontracts to obtain key expertise, access to existing facilities, or specialized goods and services. Discuss what each subcontractor brings to the project. Clearly identify what each subcontractor will do and why that subcontractor was chosen. Discuss the relationship of the work to be done by the subcontractor to the technical plan. Discuss how subcontractor progress will be monitored and redirected as appropriate. Subcontracts can be used for carrying out research tasks or for the purchase of customized goods and services necessary for project participants to carry out their research tasks. ATP expects, however, that

the proposer will direct and carry out most key high-risk tasks. Projects with a significant portion of the work allocated to a subcontractor may appear to be a “pass through” of funds from the proposer to subcontractors (who are not permitted to cost share) and will likely not be competitive. In system or device integration projects, the proposal should make clear how the proposer is involved in integrating the technologies and taking the system forward if subcontractors are key players in the actual integration tasks. The proposal should address how intellectual property issues will be handled with subcontractors to assure the reviewers that the proposer will be able to commercialize the system, and that ownership of the intellectual property resulting from the subcontract complies with the ATP statute. In the discussion, state the type of institution and work involved for each subcontract.

**e. R&D Activities at Non-U.S. Sites**—ATP strongly discourages use of non-U.S. sites for research and development activities. In the event that the project includes work performed at a non-U.S. site, the proposer will need to provide Exhibit 10, R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire. If a portion of the project can only be carried out at a non-U.S. site because of the site’s unique capabilities, the answers to the questions in Exhibit 10 should explain the technical work to be done, the relationship of this work to the overall project, the cost of this work, the unique capabilities associated with the non-U.S. site, and why equivalent work cannot be performed within the United States.

## **C. POTENTIAL FOR BROAD-BASED ECONOMIC BENEFITS PROJECT NARRATIVE**

This narrative includes the detailed information that must be provided to address the potential for broad-based economic

benefits selection criterion. The proposal should also include a list of bibliographic references supporting business assertions and economic data. This list is not included in the page limit of the proposal.

The potential for broad-based economic benefits selection criterion has three key components:

1. National economic benefits,
2. Need for ATP funding, and
3. Pathway to economic benefits.

All three components must be addressed successfully and in detail for a proposal to pass this selection criterion. The proposal must make a convincing case that substantial national economic benefits will result from successful deployment of the technology, including benefits to the proposer and, more importantly, benefits to other organizations, users, industries, and the general public. The proposal must also provide evidence that the project needs ATP funding and that without ATP funding, these benefits would not occur at the same scale, scope, timing, or at all. In addition, the proposal must identify a commercialization pathway that will use existing markets or develop new markets to achieve the economic benefits. The plans for commercialization and diffusion of the technology provide the critical link between the technical plan and the large economic benefits for the nation that would be enabled by the proposed project.

The mission of ATP is to fund research projects with strong potential for delivering large economic and societal benefits for the nation, beyond the returns to the proposer. While ATP funds cannot be used for product development or for other commercialization activities (e.g., market research, attracting investors), proposals must provide a credible commercialization plan and timeline to show how the results of the technological advancement will lead to economic growth.

Although ATP business reviewers are experts familiar with related technologies

and industries, the reviewers will only have what is written in the proposal to evaluate the project. Competitive proposals must include significant company confidential/proprietary information. ATP takes protection of that company confidential/proprietary information very seriously. ATP screens reviewers for conflicts of interest and requires reviewers to sign nondisclosure agreements. In addition, proposals are securely stored and tracked to further ensure that the proprietary information is protected. Company confidential/proprietary information (both technical and business-related) in a proposal is fully exempt from disclosure under the Freedom of Information Act (FOIA). (See Chapter 1, Section A.6. for more information on this point.)

**1. National Economic Benefits**—ATP seeks to fund broadly enabling technologies that are path-breaking in opening up possibilities for new markets and new industries, infrastructural in addressing industry-wide problems, or multi-use in having applications across a number of industries. It is important that the proposal describe how the proposed technology fits one or more of these categories. A strong case for government use of taxpayer funds for the proposed research must be made by demonstrating large benefits for the nation beyond those received by the proposing organization(s). Competitive proposals address the following key topics:

**a. Business Opportunity**—Explain the business opportunity for the technology and how the technology addresses a problem of economic importance to the nation (e.g., why the technology will remove some major impasse that has been plaguing an industry).

**b. Markets for the Technology**—Discuss who will be the potential users of the technology, the expected size of the markets for the technology in the immediate future and the more distant future, and the growth trends for those markets. The Federal government should not be the primary, or

only, buyer of the technology but could be one customer or user. When describing market sizes, be sure to discuss the market for this technology specifically, not just the size of the industry or broader product markets. For technologies that could enable new industries and new markets, discuss the expected timeline and growth of these emerging markets and industries and what initial markets might exist. In addressing existing markets where the U.S. competitive position is eroding or has been lost, discuss the expected timeline and anticipated growth trend for re-invigorating or re-establishing U.S. competitiveness or leadership and the specific role of your proposed technology in this process.

**c. Source of Benefits**—Show how the proposing company or joint venture will benefit from the proposed technology. Show how others, including potential customers, competitors, suppliers, and the general public, will benefit. Describe any performance and quality gains and cost savings to the proposing company or joint venture and to others. Describe any health, safety, national infrastructure, or environmental benefits. Describe any potential for synergies with what others are doing or with market directions.

**d. Magnitude of Impact**—Quantify the magnitude of the advantage enabled by this project in terms of its economic and business benefit. For example, benefits could be lower cost per unit to manufacture, improved fuel efficiency, or reduced time to produce software. Document societal and quality-of-life benefits and quantify these, if possible. For example, a new treatment for a disease can save costs through shorter hospital stays and quicker returns to work, but it can also provide quality-of-life benefits in less painful side effects than other treatments. Quantify wherever possible, and include a range of error in the estimate as appropriate.

Be clear in the discussion about the difference, or “added value,” that ATP

funding makes in realizing the economic benefits of the proposed project. To the extent possible, quantify the difference in national benefits with and without ATP funding. In general, competitiveness of a proposal is strengthened through clear description about the specific competitive advantage of the technology and the spectrum and number of users who will benefit in addition to well-supported projections of impact.

**2. Need for ATP Funding**—Explain why the project needs taxpayer funds and why full or partial private funding is not available. Tax dollars are used for the benefit of the nation and only secondarily for the benefit of the individual company. An overview of this section should be provided in item 15 of Form NIST-1262 or Form NIST-1263 accompanying the proposal. Be sure that the answer provided in item 15 is consistent with the discussion in the proposal (but do not duplicate the information given in item 15).

Include at the end of the proposal any letters corroborating the proposer’s efforts to secure other funding. This should include internal funding sources as well as external funding sources. (Letters are not included in the page limit; see Section D in this chapter for more information). If letters are not available, then provide, in the appendices, a paragraph listing the name of the person who decided not to fund the project, their title and organizational affiliation, the reason given for the decision, the date the decision was conveyed, and to whom the decision was conveyed. The paragraph descriptions documenting specific contacts with potential funding sources do not count against the page limit. Letters or specific descriptions are required. This documentation should be provided for each funding source that was approached and declined to fund the project.

**a. Private Sources of Funding**—Document past efforts to secure private funding. Describe attempts to obtain external private funding (e.g., venture

capital, angel investment). Describe the decision-making process and priorities for allocating internal research funds. Provide the reason those efforts were not successful.

**b. Government Sources of Funding—**Describe any other government agencies that are funding the proposed area of technology, if known. Describe any past or current submissions to other federal agencies and the outcome or current status of those submissions. Discuss why other government sources are not available and/or why other federal funding was not sought for this project.

**c. Industry Partners as Sources of Funding—**Describe any efforts made to seek full or partial funding from industry partners. Be specific in the response including specific companies that were approached and the reasons for their rejection. If industry partners were not sought, explain why.

**d. Difference in the Project Due to ATP Funding—**Describe the difference ATP funding will make to the proposed research. Be specific in terms of scale, scope, and timing of the project with and without ATP funding.

**e. Difference in the Economic Benefits Due to ATP Funding—**Describe how the difference in the proposed research discussed above would impact projected economic benefits. Be specific about, and if possible, quantify the difference that the ATP funds will make to the proposer's expected returns and to the national economic benefits. This discussion should not repeat information provided in the economic benefits section but should give supporting information as to how the changes in the research discussed above will impact the benefits stream. For example, delaying the research results could cause the project to miss a market window, or reducing the scope of the project could eliminate significant features of the

technology, thereby reducing its benefit to customers.

**3. Pathway to Economic Benefits—**ATP expects the proposing organizations to take the lead in commercializing the technology. The proposal needs to provide a credible, complete pathway to the benefits described and must clearly detail how the technology will get into and be used in the marketplace.

**a. Commercialization Plan—**Discuss how the technology will enter the market. ATP anticipates that the pathway to economic benefits will generally begin by entry of new/improved products, processes, and services into the marketplace. Whether a large or small company, the proposer must address commercialization, including the plan to achieve market success. In competitive proposals, commercialization is typically planned at the outset, and business staff are involved at the proposal writing stage. For large companies, indicating that the technology will be passed to an internal sales and marketing division or providing a generic plan is not sufficient. For companies that do not yet have business or marketing expertise, the company will need to obtain that expertise to generate the commercialization plan. The proposal must document a proposed plan and the timeline to successfully commercialize the technology. For small companies, include plans to build the necessary business infrastructure (i.e., hiring staff) and alliances if necessary, to be successful.

Understand the difference between 'market pull' and 'technology push'. In other words, a fantastic technology may capture the imagination, but not necessarily the market. History has many examples of great technology losing out to an inferior competitor because of failure to demonstrate value to potential users. Path-breaking technologies may, in the long run, lead to the development of new markets and industries; however, the proposer will need to survive in the short run to achieve this

long-term vision. Be sure to discuss both long-term market development and more immediate markets that will help bring in revenues to sustain and grow the company.

The following key topics are typically part of a competitive commercialization plan:

**(1) Strategic Vision**—Describe the company’s strategic vision. Indicate where the company plans to be in five (5) years. The commercialization plan should fit the company and its expected resources.

**(2) Products and Market**—Demonstrate an understanding of the market opportunity. Identify the planned initial products, processes, or services and how these incorporate the technology. Provide the business advantage of the proposed technical approach over other competitors. Discuss potential competitors, the key drivers and players for this market, and what technology they bring to the problem. Assess strengths, weaknesses, and opportunities from a competitive standpoint. Describe company strengths for capitalizing on the advantages of the proposed new technology and overcoming challenges in confronting the current ways of doing things.

**(3) Window of Opportunity**—Identify the window of opportunity for the planned product. Identify when the planned product, process or service will enter the market. Indicate how long a competitive advantage can be maintained as a result of successfully developing the proposed technology. Explain to what extent this is a leap beyond what competitors will have.

**(4) Strategy for Bringing the Product to Market**—Describe the company’s strategy for bringing the product into the market. Be as specific as possible. Some examples might be licensing, direct sales, or contract manufacturing. Describe the business model for the proposed ATP technology. How will it create value for customers (internal or

external) and how will it capitalize on that value?

**(5) Strategic Alliances and Early Adopters**—Discuss the role of strategic alliances and marketing arrangements in the commercialization plan. Identify the types of partners needed for commercializing the product. Letters of support from any current or potential partners for the new technology are helpful (see Section D for more information). For partnerships that are not yet in place, identify specific needs and the timing necessary for those arrangements for the commercialization to be successful. Identify potential partners, if known. For those partners who have been approached and who do not provide a letter of support, the proposer must provide in the appendices, a description of who was approached, their title and organizational affiliation, and the details of the contact and commitments to date.

**(6) Pricing and Sales**—Describe the pricing strategy for the planned product and the rationale for choosing that strategy. Indicate the magnitude of sales anticipated and the timing of those sales.

**(7) Investment Strategy**—Indicate what additional investment will be needed to commercialize the technology and from where that investment will come. Describe your plan to attract funding that is consistent with meeting your market entry timing.

ATP recognizes that the inability to achieve full technical success, as well as unanticipated developments in fast-moving markets, can change opportunities and alter plans. Discuss the possibility of adjustments to the commercialization plan in response to different or changing conditions. Some path-breaking technologies have the potential to lead to the development of new markets and industries. Companies commercializing these technologies have the added challenge of describing how they will foster the growth of these new markets and industries.



**b. Intellectual Property Protection and Broader Diffusion**—Describe how the research results and contributions to the U.S. technology base will diffuse beyond the proposing organization while maintaining ownership of core knowledge needed to commercialize the project’s technical results. Discuss the planned use of patents, copyrights, trade secrets, and any other forms of intellectual property protection. Discuss any planned strategy for publishing or disseminating the technical results, including enabling methodologies that may not be patented. Describe licensing strategies outside the core application areas discussed in the commercialization plan. ATP is interested in these indirect paths as well as the paths to direct customers because they often expand opportunities for intra- as well as inter-industry diffusion. ATP encourages the protection of proprietary information to maintain incentives for the commercialization of the technology. ATP also expects that the proposing organization will take specific steps to diffuse the new technology broadly.

**c. Company Commitment**—Describe the company’s commitment to the ATP project. This commitment includes the resources to be brought to the ATP project as an active ATP award and post-award in the development of commercial projects. Describe the commitment in terms of the financial resources, time commitment of key people in the organization, equipment, and dedicated facilities. Commitment can also be demonstrated in the priority this project is given relative to other company activities. Describe the relationship of this project to the company’s strategic vision and direction. Provide evidence of commitment from senior management to the project. ATP requires letters of commitment signed by an authorized senior executive of the company from single company proposers and from all partners in a joint venture (see Section D for more information). These letters must verify the availability of all cost share funds and list any specific in-kind contributions. If there are commitments from regional,

state, or local agencies or private sources of capital to contribute cost-sharing funds, indicate the nature of those arrangements and give evidence of the commitment. NOTE: Subcontractors may not provide cost share.

**d. Organizational Structure and Project Management**—Provide evidence of a solid organizational structure that makes sense for the company, project, and management plan. The role of each partner in a joint venture and each subcontractor as well as what each is expected to deliver on the project should be clear. The proposal should not repeat information already provided in the scientific and technological merit project narrative. Indicate the reporting relationships and responsibilities for technical and commercialization activities. Identify known weaknesses in organizational structure and how they will be overcome. Planning a complex joint venture or a single-company project will likely involve collaborative activities and relationships with other organizations. It is prudent not to underestimate the time as well as legal challenges that are frequently encountered in consummating a joint venture arrangement.

**e. Business Experience and Qualifications**—Describe the business staff who will be working on the commercialization activities for the technology. While ATP funds cannot be used for product development and other commercial activities, ATP funding decisions are based in part on a consideration of the opportunities for commercial success. Indicate the amount of time each individual on the business staff will be allocating to benefit the project; however, time spent on commercialization activities must not be included in the budget. Briefly highlight the education and experience of key staff. Discuss relevant past commercialization performance of the company and/or key staff and describe other unique capabilities and experience. Commercialization experience of key staff

or an established relationship with an experienced advisor (i.e., business consultant) is very important for small companies that are just starting up. If the proposal is selected as a semifinalist, ATP may request two-page resumes for the key business staff.

**f. Organizational Information**—ATP needs to know about the current status of the companies involved in a project it might fund. Provide information about how the proposing organization(s) is organized, financial information, past experience, and related government work. Should the proposal be selected as a semifinalist, additional information beyond that listed below will be required.

**(1) Date and State of Incorporation**—Provide the date of incorporation and the state in which the company is incorporated. For startup companies, this could be information for the planned incorporation, including key dates.

**(2) Previous Federal Awards**—Provide a list of all current and past federal R&D contracts, grants, and other awards for the previous five (5) years and all pending federal awards. For example, provide a list of the Small Business Innovative Research (SBIR) grants received for the previous five (5) years. Include the name of the project, the funding agency/organization, the grant/contract/award number, the principal investigator, and the federal government contact's name and phone number. For current or past awards having some relationship to the technology being proposed to ATP, briefly describe how the proposed project is different and not a duplicative effort.

**(3) Source of Cost Share**—Describe how the company will obtain the necessary funds to meet the direct cost match. Remember that once a cost-share rate is proposed, it cannot be decreased. Describe how the company expects to meet its indirect costs. For small companies, this is critical to

evaluating the financial viability of the company.

**(4) Financial, Employment, and Ownership Information**—Provide information about the financial status, current employees, and ownership of the proposing single company or for each member of a proposed joint venture. See Table 7 for the required format. These worksheets must be provided as an appendix to the proposal. The worksheet is not included in the page limit; however, only this worksheet may be included in the appendix and used in the evaluation. If financial statements or annual reports are included as an appendix, they will be discarded before the proposal review process begins. If the proposal is selected as a semifinalist, then the proposing single company or, for a joint venture, each joint venture member will be asked to provide the following:

(a) For privately held companies: most recent financial statements

(b) For publicly traded companies: most recent 10-K SEC filing or annual report

(c) For start up companies that do not have past financial statements: Provide a detailed description of how the indirect costs and any direct cost share will be met on a quarterly basis for the first year of the project. The company does not need to have the funding for the full year up front, but a credible plan to have it on a quarterly basis is required.

Financial report type is determined by ownership structure of the company, not company size. This information is critical to evaluating the potential financial viability of the proposing company. Lack of financial viability would indicate that the company does not have the resources to meet their contribution to the technical tasks proposed for ATP funding – in terms either of direct cost share or meeting the indirect costs associated with accomplishing the technical plan.

**Table 7: Financial, Employment, and Ownership Information for the Previous Three (3) Years**

| <b>Financial Information</b>                       |                             |  |                               |
|--|-----------------------------|--|-------------------------------|
|  | <b>Current Year to Date</b> | <b>Last Year</b>                                   | <b>Two Years Ago</b>          |
| <b>Income</b>                                      |                             |  |                               |
| Contract R&D                                       |                             |  |                               |
| Product Sales                                      |                             |  |                               |
| Other  |                             |  |                               |
| Total income                                       |                             |  |                               |
| <b>Expenditures</b>                                |                             |  |                               |
| Cost of goods sold                                 |                             |  |                               |
| R&D  |                             |  |                               |
| General and administrative                         |                             |  |                               |
| Total income                                       |                             |  |                               |
| <b>Gross income before taxes</b>                   |                             |  |                               |
| <b>Net income after taxes</b>                      |                             |  |                               |
| <b>Balance Sheet</b>                               |                             |  |                               |
|  | <b>Current Year to Date</b> | <b>Last Year</b>                                   | <b>Two Years Ago</b>          |
| <b>Assets</b>                                      |                             |  |                               |
| Current assets                                     |                             |  |                               |
| Fixed assets                                       |                             |  |                               |
| Total assets                                       |                             |  |                               |
| <b>Liabilities</b>                                 |                             |  |                               |
| Current liabilities                                |                             |  |                               |
| Long-term liabilities                              |                             |  |                               |
| Stockholders equity                                |                             |  |                               |
| Total liabilities                                  |                             |  |                               |
| <b>Employment Information</b>                      |                             |  |                               |
|  | <b>Number of Employees</b>  |  |                               |
|  | <b>Current Year to Date</b> | <b>Last Year</b>                                   | <b>Two Years Ago</b>          |
| Full time  |                             |  |                               |
| Part time  |                             |  |                               |
| Full time R&D                                      |                             |  |                               |
| Part time R&D                                      |                             |  |                               |
| <b>Ownership Structure (for private companies)</b> |                             |  |                               |
|  | <b>Current Percentage</b>   | <b>For private companies less than 3 years old</b> | <b>Current Capitalization</b> |
| Founders   |                             | Venture capital                                    | \$                            |
| Directors  |                             | Angel Investors                                    | \$                            |
| Employees  |                             | Individuals  | \$                            |
| Investors  |                             | Other (e.g., state)                                | \$                            |
| Individuals  |                             | Self-funded (officers/directors)                   | \$                            |
| ESOP   |                             |  | \$                            |

## **D. REQUIRED LETTERS** (letters are not included in the page limit)

*ATP reviewers scrutinize the content of letters very carefully to understand the actual commitment of the signator. Table 8 provides a summary of which letters are required under what conditions. The remainder of this section documents what is required in each type of letter.*

**1. Letters of Commitment**—Letters of commitment are committing specific resources to the project in the event that the proposal is successful.

**a. Single Company Proposer**—A letter of commitment from an authorized senior executive of the company is required. Indication of the importance of the project to the company, and the company’s commitment to supply key resources (e.g., the time of key personnel, cost-share funding facilities, and commercialization after the project ends) is helpful. This letter should verify the availability of cost-sharing funds for any direct cost share and for all indirect costs and describe any in-kind contributions being made to the project.

**b. Joint Venture Proposer**—ATP requires letters of commitment verifying the availability of cost-sharing funds and a description of any in-kind contributions from all participants in the joint venture. Such letters must be signed by an individual having authority to commit company funds to the project.

**c. Subcontractors**—Letters of commitment from subcontractors who are key to the technical plan’s success are useful for verifying the availability of resources, but are not required.

**d. Prospective Employees**—Letters of commitment to join the company are useful for verifying the availability of key personnel, who are not yet employed at the proposing company, to participate in the project if the ATP project is awarded. These letters are especially useful for very small companies. These letters are not required.

**2. Letters of Support**—Letters of support indicate a willingness from potential partners to become involved later in the project if it is awarded and successful. Examples of support letters to include, as appropriate follow:

**a. Contingent Funding**—Sometimes a potential investor will indicate a strong interest in evaluating the results of a project for possible future commercialization funding. This type of letter can help verify that the pathway to commercialization in the proposal has been studied and is feasible. If this funding is critical to the financial viability of the company in the first year of the project, a letter is required.

**b. Strategic Partners**—Strategic partners can aid in any element of the commercialization plan. Letters from strategic partners can demonstrate that the proposer has researched the market, has the necessary contacts and commitments to validate the commercialization plan and has considered the later commercialization needs early in project planning. If letters are not available, but there has been some contact with a potential strategic partner, the proposer may document in a paragraph the contact providing, name, title and organizational affiliation of the contact, date of the contact and extent of the contact. This paragraph can go in the appendices, outside the page limit.

**3. Letters of Corroboration, Documenting Efforts to Secure Other Funding**—Letters documenting the proposer’s search for capital prior to seeking funds from ATP are required for documenting the proposer’s need for ATP funding. This especially includes letters from potential funding sources indicating why they chose not to fund the project. If a letter from a potential funding source that chose not to fund the project is not available, the proposer must document the interaction with the funding source as noted in Section C.2 in this chapter in the discussion of the Need for ATP Funding component of the Potential for Broad-Based Economic Benefits selection criterion. This information is not

included in the page limit and should include the name of the person who decided not to fund the project, their title and organizational affiliation, the reason given for the decision, the date the decision was conveyed and to whom it was

conveyed. This should be done for each funding source that was approached and declined to fund the project.

**Table 8: Summary of Types of Letters – Required or As Appropriate**

| Type of Letter  | Required  | As Appropriate  |
|---|---|---|
| <b>1. Letters of Commitment</b>                                       |   |   |
| a. Single Company Proposer  | Required – signed by senior company executive; must document financial and any in-kind contributions  |   |
| b. Joint Venture Proposer   | Required from all partners – signed by individual having authority to commit company funds to the proposed project; must document financial and any in-kind contributions |   |
| c. Subcontractors   |   | Optional – useful if subcontractor is critical to project   |
| d. Prospective Employees  |   | Optional – useful if key personnel are not yet company employees  |
| <b>2. Letters of Support</b>  |   |   |
| a. Contingent Funding   | Required only when funding is critical in the first year of the project   |   |
| b. Strategic Partners   |   | Optional – Letters or descriptions of contact with potential partners is helpful to document commercialization progress |
| <b>3. Letters of Corroboration</b>                                    |   |   |
| Letters of corroboration, documenting efforts to secure other funding | Required - Letters or descriptions documenting contact with funding sources and the outcome   |   |



## EXHIBITS

The required forms and other proposal-related documents follow this page. All of the forms and documents are available on the ATP website at <http://www.atp.nist.gov/atp/helpful.htm>.

1. Checklist/Reminders for Submission of an ATP Proposal
2. Human Subjects Determination Checklist
3. General Instructions for Submitting ATP Proposals Electronically Via Grants.gov
4. Form NIST-1262 (four pages): Single-Company Advanced Technology Program (ATP) Proposal Cover Sheet
5. Form NIST-1263 (five pages): Joint Venture Advanced Technology Program (ATP) Proposal Cover Sheet
6. SF-424 (R&R) (2 pages), Application for Federal Assistance
7. Research and Related Other Project Information
8. Budget Narrative
9. Foreign-Owned Company Questionnaire
10. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire





## CHECKLIST/REMINDERS FOR SUBMISSION OF AN ATP PROPOSAL

### A. SINGLE COMPANY (also complete items under C and D below)

- 1. No indirect costs are included in the ATP funds requested.
- 2. If a large company (including any parent company plus related subsidiaries, having annual revenues in excess of \$3.214 billion), cost sharing is at least 60 percent of total yearly project costs (direct plus all of the indirect costs).
- 3. Total project duration does not exceed 3 years.
- 4. Total ATP funding requested does not exceed \$2 million.
- 5. If direct cost sharing is proposed, proposer understands that it will be bound by that amount/percentage if selected for funding.

### B. JOINT VENTURE (also complete items under C and D below)

- 1. Cost sharing is more than 50 percent of total yearly project costs (direct plus indirect costs).
- 2. Total project duration does not exceed 5 years.
- 3. At least two separately owned, for-profit companies are substantially involved in the R&D and both are contributing to the cost share.

### C. SINGLE COMPANY AND JOINT VENTURE

- 1. Amounts on page 3 of Form NIST-1262 or Form NIST-1263 add up and correspond with amounts in Budget Narrative.
- 2. Total value of in-kind contributions does not exceed 30 percent of nonfederal share of total project costs.
- 3. Information on page 4 of Form NIST-1262 or page 5 of Form NIST-1263 (Subcontracts) corresponds with information in the Project Narrative and Budget Narrative.
- 4. If submitting proposal by paper, 16 copies of the proposal (1 original, signed, bound proposal plus 15 copies [1 unbound and 14 bound]) are provided.
- 5. Proposal should contain the following and be assembled in the order listed below:
  - a. Form NIST-1262 (all four pages) (see Exhibit 4) or Form NIST-1263 (all five pages) (see Exhibit 5)
  - b. SF-424 (R&R), Application for Federal Assistance (see Exhibit 6)
  - c. Research and Related Other Project Information (see Exhibit 7)

- d. Executive Summary.
- e. Project Narrative: Scientific and Technological Merit—Detailed information addressing the scientific and technological merit selection criterion including the following:
  - (1) Technical Innovation—Detailed information describing the proposed innovation, why it is innovative, technical barriers that prevent technical advancement in this area, the technical objectives and targets of the proposed research, technical competitors, and impact on the U.S. knowledge base of the proposed research.
  - (2) Technical Risk With Evidence of Scientific Feasibility—Detailed information about the technical risks of the research, and the scientific foundation or rationale for the approach.
  - (3) Technical Plan—Detailed plan explaining how the targets and objectives will be achieved, including task and subtask descriptions, task interrelationships, metrics, milestones, decision points, alternate approaches, qualifications of key personnel, information on facilities and information on subcontractors.
- f. Project Narrative: Potential for Broad-Based Economic Benefits—Detailed information addressing potential for the broad-based economic benefits selection criterion including the following:
  - (1) National Economic Benefits—Detailed information describing the potential benefit to the U.S. economy from the innovation (e.g., product, process, or method), including a discussion of the business opportunity, market for the technology, source of the economic benefit, and the magnitude of the economic impact.
  - (2) Need for ATP Funding—Detailed information describing the company’s efforts to obtain funding from other sources for the project and quantification of the difference that ATP funding would make, consistent with the information supplied in response to Question 15 on Form NIST-1262 or Form NIST-1263.
  - (3) Pathway to Economic Benefits—Detailed information describing the company’s commercialization plan including its strategic vision; proposed product, process, or method; window of opportunity; customers; and strategic alliances. Also, detailed information about the company’s plans to protect the intellectual property and diffuse the technology, as well as the company’s commitment to the project, organizational structure, business experience, and general organizational information.
- g. List of bibliographic technical references supporting technical assertions and data including patent citations.
- h. List of bibliographic references supporting business assertions and economic data.
- i. Table of Abbreviations.
- j. Foreign-Owned Company Questionnaire, if applicable (see Exhibit 9).

- k. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire, if applicable (see Exhibit 10)
- l. Letters of commitment, as required (see Chapter 3, Section D)
- m. Letters of support, as appropriate (see Chapter 3, Section D)
- n. Letters of corroboration, documenting efforts to secure other funding, as required (see Chapter 3, Section D)
- o. Budget Narrative (see Exhibit 8)
- p. Human and/or animal subjects documentation, if applicable. (See Exhibit 2, Human Subjects Determination Checklist, to assist in determining whether the proposal may have human subjects involvement, which would require additional documents with the proposal submission. If the required information is not included with the proposal, the proposal may be deemed unacceptable. Please refer to the booklet titled *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*, which can be obtained at <http://www.atp.nist.gov/atp/helpful.htm> or by calling 1-800-287-3863. Timelines for submission of required human subjects and vertebrate animal documentation are included in the booklet as Appendix 5 and 6.)

NOTE: If a proposal is selected as a semifinalist, the following additional forms and documents will be required when requested by ATP and are available at (<http://www.atp.nist.gov/atp/helpful.htm>), unless otherwise noted:

1. SF-424B, Assurances—Non-Construction Programs.
2. Form CD-511, Certifications Regarding Lobbying.
3. SF-LLL, Disclosure of Lobbying Activities, if applicable.
4. Form CD-346, Applicant for Funding Assistance.
5. Financial information (see Chapter 3, Section C).
6. For joint ventures only, a credible draft Joint Venture Agreement that must be initialed by each joint venture participant acknowledging review and preliminary concurrence.
7. Additional human and/or animal subjects documentation, if applicable.

**D. PAGE LIMITS**

|                       |  |
|-----------------------|--|
| <b>Single Company</b> | <b>40 pages</b> (Typically a proposal has an equal number of pages to address each of the two selection criteria, i.e., the Scientific and Technological Merit selection criterion and the Potential for Broad-Based Economic Benefits selection criterion.) |
| <b>Joint Venture</b>  | <b>60 pages</b> (Typically a proposal has an equal number of pages to address each of the two selection criteria, i.e., Scientific and Technological Merit selection criterion and the Potential for Broad-Based Economic Benefits selection criterion.)     |

**Page limits exclude:** SF-424 (R&R), Application for Federal Assistance; Research and Related Other Project Information; Forms NIST-1262 and NIST-1263; Budget Narrative Executive Summary; list of bibliographic technical references; list of bibliographic references supporting business assertions and economic data; Table of Abbreviations; Table 7, Financial, Employment, and Ownership Information for the Previous three (3) Years; Foreign-Owned Company Questionnaire; R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire; letters of commitment; letters of support; letters of corroboration; and any human and/or animal subjects documentation.

**Page limits include:** All text, schematics, diagrams, flowcharts, tables (except Table 7, Financial, Employment, and Ownership Information for the Previous three (3) Years), pictures, images, illustrations, and resumes. To maximize pages for relevant technical and business information, the following suggestions are offered:

1. List data only for the key people and briefly highlight their education and experience. Do not include lengthy resumes for all people involved in the project.
2. Do not include copies of published papers as appendices or lengthy lists of publications.
3. Do not include supplemental material not specifically requested in this Proposal Preparation Kit, either separate from or bound with the proposal.
4. Do not include company sales catalogs, financial statements (ATP will request these if the proposal is selected as a semifinalist), videotapes or audiotapes, presentation slides, and other marketing materials.

## HUMAN SUBJECTS DETERMINATION CHECKLIST

*This checklist should be used to determine whether human subjects are involved in the research project and whether the research is exempt under the Department of Commerce regulations (see 15 C.F.R. Part 27) for the protection of human subjects. A proposal may contain more than one research activity involving human subjects, and each activity may require a different level of review. This checklist should be used for each potential use of human subjects.*

1. Is there an intervention or an interaction with a living person that would not be occurring or would be occurring in some other fashion but for this research? Examples: videotaping people, observing children using software, surveying manufacturing personnel during a pilot test of new equipment, gathering tissue or cells from living human donors.
  - Yes—Human subjects are involved. Go to question 3.
  - No—Go to question 2.
2. a. Will data/information/specimens previously collected originally from people or about people be used in this research? Examples: broadcast video, web-use logs, medical information, cells or tissues, survey questions.
  - Yes—Identifiable human subjects may be involved. Go to question 2.b.
  - No—Go to question 6. It appears that human subjects may not be involved in the project. However, an exemption determination may be required. Please review question 3 for additional information about research that may require an exemption determination.
- b. Does that information contain private information in a form in which the identity of the subject is or may readily be ascertained from the information? Examples: medical records, donor name or address, sales transaction records.
  - Yes—Identifiable human subjects are involved. Go to question 3 to see if an exemption may apply. If you know that an exemption does not apply, proceed to question 5.
  - No—Go to question 3. The research may not be within the scope of 15 C.F.R. Part 27; however, it may require an exemption determination to be made due to the use of data, recordings, or specimens that could be linked to humans without appropriate safeguards.
3. Do you think the research task may either not be within the scope of 15 C.F.R. Part 27 or qualify for an exemption under 15 C.F.R. § 27.101(b)? The following questions will help you evaluate whether to request an exemption determination by ATP or provide documentation that the research may not be within the scope of 15 C.F.R. Part 27:
  - a. Will the research task involving human subjects use only existing data, recordings (audio or visual), or specimens? Examples: patient records, a company's customer data, web-use logs, cells, or tissue.
    - Yes—Go to question 3.d.
    - No—Go to question 3.b.
  - b. Will the research task involve only normal educational practices such as instructional strategies or comparison of instructional techniques, curricula, or classroom management methods? Examples: observation of student-teacher or student-computer interactions, video taping instructional approaches.

- Yes—Go to question 3.d.
  - No—Go to question 3.c.
- c. Will the research task involve only educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior? Examples: broadcast video, software usage testing, recordings from security cameras.
- Yes—Go to question 3.e.
  - No—Go to question 5. This research is probably not exempt and will require Institutional Review Board (IRB) review and approval.
- d. Do any of the data, recordings, specimens, or practices involve prisoners. Examples: testing educational software with prisoners, video taping or surveying prisoners or detainees under the authority of a law enforcement entity.
- Yes—Go to question 5. This research is probably not exempt and will require IRB review and approval.
  - No—Go to question 3.f.
- e. Do the procedures or observations of public behavior involve prisoners or children?
- Yes—Go to question 5. This research is probably not exempt and will require Institutional Review Board (IRB) review and approval.
  - No—Go to question 3.h.
- f. Are the data, recordings (audio or visual), or specimens publicly available?
- NOTE: Publicly available may include items for sale, items that are freely available to the public, or items that reside in the public domain. Examples: customer data sets, catalog orders of cells or tissues, donations of pathological specimens, shareware.
- Yes—Go to question 4. This research may be exempt under 15 C.F.R. § 27.101(b).
  - No—Go to question 3.g.
- g. Will the data, recordings (audio or visual), or specimens be stripped of all identifiable information that could be linked to a human subject prior to being received by the investigator?
- Yes—Go to question 4. This research may not be within the scope of 15 C.F.R. Part 27, or this research may be exempt under 15 C.F.R. § 27.101(b).
  - No—Go to question 3.h.
- h. Will information be recorded by the investigator in such a way that it can be linked to the human subject? Examples: web-use logs tied to e-mail address, patient records, or specimens that include patient identifiers.
- Yes—Go to question 5. This research is probably not exempt and will need an IRB review.
  - No—Go to question 4. This research may be exempt under 15 C.F.R. § 27.101(b).

4. An exemption under 15 C.F.R. § 27.101(b) may apply to the task, or the task may not be within the scope of 15 C.F.R. Part 27. In order to complete the necessary requirements for research considered exempt under 15 C.F.R. § 27.101(b), please review the *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*. A copy of that booklet can be obtained on the ATP website at <http://www.atp.nist.gov/atp/helpful.htm> or by calling 1-800-287-3863. Complete Appendix 3 and/or Appendix 4 in the booklet as required and submit with your proposal or your request to add the research activity to an ongoing project.
5. An exemption probably does not apply to the proposed research, however further documentation may still be required. Please review the *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*. A copy of that booklet can be obtained on the ATP website at <http://www.atp.nist.gov/atp/helpful.htm> or by calling 1-800-287-3863. See Appendix 5 in the booklet for the required documentation list for your proposal or to add the research activity to an ongoing project.
6. It appears that human subjects are not involved in this project. This checklist is only a tool for general guidance and does not constitute a final legal opinion from NIST on whether or not human subjects are involved, or whether or not an exemption determination under the regulations is needed. If upon NIST/ATP review of your proposal, it is determined that additional documentation is needed to reach a final determination, and your proposal is selected as a semifinalist, you will be asked to provide the additional documentation at that time.





## GENERAL INSTRUCTIONS FOR SUBMITTING ATP PROPOSALS ELECTRONICALLY VIA GRANTS.GOV

1. **How to Start.** Go to the [www.grants.gov](http://www.grants.gov) website and click on “Apply for Grants” under “For Applicants” in the left column and follow the instructions. The first thing you’ll need to do is register.
  2. **Registration Process.** Before using Grants.gov for the first time, each proposer must register to create an institutional profile [http://www.grants.gov/applicants/get\\_registered.jsp](http://www.grants.gov/applicants/get_registered.jsp). Once registered, the proposer can then apply for any federal government grant or cooperative agreement on the Grants.gov website, including ATP.

To avoid any potential processing backlogs due to last minute registrations, proposers *are highly encouraged to start their Grants.gov registration process at least four weeks prior to the proposal submission due date*. New businesses (i.e., those applying to the Internal Revenue Service (IRS) for an Employer Identification Number (EIN) to complete the registration) should start the process *at least eight weeks* prior to the proposal submission due date.

ATP will not make any allowances for submission delays due to incomplete Grants.gov registration.
  3. **Downloading a Grant Application Package and Instructions from [www.grants.gov](http://www.grants.gov).** Once you are registered:
    - a. Go to the “Apply for Grants” page and click on the **Download a Grant Application Package and Instructions** link.
    - b. Enter the **CFDA Number** as 11.612 for ATP. Leave the Funding Opportunity Number and the Funding Opportunity Competition ID fields blank. Click on the **Download Package** button.
    - c. If you have not already done so, follow the instructions to download and install the latest **PureEdge viewer**. It is important that you use the latest version of this viewer.
  4. **Software Requirements.** In order to access, fill out, and electronically submit a proposal, proposers need to download and install the latest version of the PureEdge Viewer from Grants.gov and the latest version of the Free Adobe™ Reader (version 8). Download and installation instructions for the Adobe™ Reader are available at <http://www.adobe.com/products/acrobat/readstep.html>. For minimum system requirements and additional download instructions, please see the Grants.gov User Guide.
- d. Under the heading **Instructions & Application** click on **Download**.
  - e. On the next screen click on **Download Application Instructions** and print out the detailed instructions for the submission process. Read these instructions carefully before continuing.
  - f. Once you understand the instructions and have assembled your completed proposal and all appropriate documents on your computer, return to where you left off in Grants.gov and click on **Download Application Package**.
  - g. Follow the instructions that you have printed out to complete your electronic submission. Remember, you will need to be completely familiar with the requirements in the ATP Proposal Preparation Kit and the Federal Funding Opportunity (FFO) notice to begin the proposal preparation process. Both of these documents are available on the ATP website at <http://www.atp.nist.gov/atp/helpful.htm>. The FFO is also available on the [www.grants.gov](http://www.grants.gov) website under “Quick Links” by clicking on “Grant Search” then under the heading “Search by CFDA Number” type 11.612.

5. **Proposal Components.** Complete proposals must include the following forms and documents:
- a. SF-424 (R&R), Application for Federal Assistance. [Note that any other SF-424, such as the SF-424 Core Form, are NOT required for submitting ATP proposals]
  - b. Research and Related Other Project Information. You will use this form to attach the remaining documents in your electronic submission.
  - c. NIST-1262 (four pages), Single Company Advanced Technology Program (ATP) Proposal Cover Sheet **or** NIST-1263 (five pages) Joint Venture Advanced Technology Program (ATP) Proposal Cover Sheet.
  - d. Executive Summary
  - e. Project Narrative, includes detailed information addressing the Scientific and Technological Merit and Potential for Broad-Based Economic Benefits selection criteria.
  - f. List of bibliographic technical references supporting technical assertions and data including patent citations.
  - g. List of bibliographic references supporting business assertions and economic data.
  - h. Table of Abbreviations.
  - i. Foreign-Owned Company Questionnaire, if applicable.
  - j. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire, if applicable.
  - k. Letters of commitment, as required
  - l. Letters of support, as appropriate
  - m. Letters of corroboration, documenting efforts to secure other funding, as required.
  - n. Budget Narrative
  - o. Human and/or animal subjects documentation, if applicable.

The first two forms above are available as part of the Grants.gov application kit and can be completed through the download application process described above in

Section 3e, Downloading a Grant Application Package and Instructions from [www.grants.gov](http://www.grants.gov). The remaining forms are available on the ATP website (<http://www.atp.nist.gov/atp/helpful.htm>).

There is no set format for the Project Narrative, other than it is a word-processed document written by the proposer that must be responsive to the detailed guidelines in Chapter 3 of the ATP Proposal Preparation Kit.

The proposer is responsible for ensuring that the proposal, whether submitted via Grants.gov or by hardcopy, is complete and that it conforms to the requirements of the ATP Federal Funding Opportunity notice and ATP Proposal Preparation Kit. Proposals that deviate substantially from these guidelines or that omit required information may be found unresponsive and may not be considered for funding. Please read, understand, and follow the Application Instructions that are available once you register and open the ATP application form on Grants.gov.

6. **Contact Information.** For further information or questions regarding applying electronically for the ATP FY 2007 competition contact Christopher Hunton at 301-975-5718 or at [christopher.hunton@nist.gov](mailto:christopher.hunton@nist.gov) or Sue Li at 301-975-8817 or at [sue.li@nist.gov](mailto:sue.li@nist.gov).

Proposers are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting a proposal through Grants.gov. Proposers should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the proposer is advised to (a) print any error message received, and (b) call Grants.gov directly at 1-800-518-4726 for immediate assistance.

Grants.gov hours of operation are Monday-Friday, 7:00 a.m. to 9:00 p.m. Eastern Time (except for Federal holidays).

NIST-1262  
 (REV. 3-2007)  
 DAO 203-26

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

(FOR ATP USE ONLY)

**SINGLE COMPANY ADVANCED TECHNOLOGY PROGRAM  
 (ATP) PROPOSAL COVER SHEET**  
 (CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER 11.612)

Public reporting burden for this collection of information is estimated to average forty (40) hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Director, Advanced Technology Program, National Institute of Standards and Technology, 100 Bureau Drive, Stop 4700, Gaithersburg, Maryland 20899-4700.

|                       |   |                              |                                     |
|-----------------------|---|------------------------------|-------------------------------------|
| 1. COMPETITION NUMBER | 2. EMPLOYER IDENTIFICATION NUMBER (EIN) | 3. DUN AND BRADSTREET NUMBER | 4. PROJECT DURATION<br>YEARS MONTHS |
|-----------------------|---|------------------------------|-------------------------------------|

|   |  |
|---|--|
| 5. LEGAL NAME, ADDRESS, AND WEBSITE OF SUBMITTING ORGANIZATION<br>ORG:<br><br>ADDRESS 1:<br>ADDRESS 2:<br>CITY:<br>STATE: ZIP:<br>WEB SITE: | 6. NAME OF PRINCIPAL INVESTIGATOR AT SUBMITTING ORGANIZATION<br>(Address required, if different than Item 5)<br>FIRST NAME:<br>LAST NAME: SUFFIX:<br>ADDRESS 1:<br>ADDRESS 2:<br>CITY:<br>STATE: ZIP:<br>PHONE:<br>FAX:<br>E-MAIL: |
|---|--|

|  |  |
|--|--|
| 7. NAME OF BUSINESS MANAGER AT SUBMITTING ORGANIZATION<br>(Address required, if different than Item 5)<br>FIRST NAME:<br>LAST NAME: SUFFIX:<br>ADDRESS 1:<br>ADDRESS 2:<br>CITY:<br>STATE: ZIP:<br>PHONE:<br>FAX:<br>E-MAIL: | 8. NAME OF GRANT/CONTRACT MANAGER AT SUBMITTING ORGANIZATION<br>(Address required, if different than Item 5)<br>FIRST NAME:<br>LAST NAME: SUFFIX:<br>ADDRESS 1:<br>ADDRESS 2:<br>CITY:<br>STATE: ZIP:<br>PHONE:<br>FAX:<br>E-MAIL: |
|--|--|

9. ORGANIZATION TYPE (Mark one in columns 1 and 2 and any that apply in column 3.)

|   |  |   |
|---|--|---|
| <input type="checkbox"/> PROFIT - SMALL BUSINESS  | <input type="checkbox"/> PROFIT - LARGE BUSINESS | <input type="checkbox"/> PUBLIC COMPANY (Ticker symbol _____) |
| <input type="checkbox"/> PROFIT - MEDIUM BUSINESS |  | <input type="checkbox"/> FOREIGN-OWNED, U.S.-LOCATED COMPANY  |

| 10. SOURCES OF FUNDS       | YEAR 1 | YEAR 2 | YEAR 3 | TOTAL |
|----------------------------|--------|--------|--------|-------|
| A. ATP (Direct costs only) | \$     | \$     | \$     | \$    |
| B. PROPOSER                | \$     | \$     | \$     | \$    |
| C. TOTAL (A + B)           | \$     | \$     | \$     | \$    |

11. PROPOSAL TITLE

12. NONPROPRIETARY PROPOSAL ABSTRACT

13. CERTIFICATION: BY SIGNING THIS PROPOSAL COVER SHEET, I CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL INFORMATION IN THIS PROPOSAL IS TRUE AND CORRECT AND THAT THE FOLLOWING QUESTIONS HAVE BEEN TRUTHFULLY ANSWERED:

|   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| A. IS THIS PROPOSAL REQUESTING FUNDING FOR EXISTING OR PLANNED RESEARCH PROJECTS THAT WOULD BE CONDUCTED IN THE SAME TIME PERIOD IN THE ABSENCE OF FINANCIAL ASSISTANCE UNDER ATP?  | <input type="checkbox"/> | <input type="checkbox"/> |
| B. IS THE COMPANY DELINQUENT ON ANY FEDERAL DEBT? (If yes, explain in item 14.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| C. WAS THIS PROPOSAL OR A VERY SIMILAR PROPOSAL SUBMITTED TO ANOTHER FEDERAL AGENCY? (If yes, explain in item 14.)  | <input type="checkbox"/> | <input type="checkbox"/> |
| D. DOES THE PROPOSED R&D INVOLVE THE USE OF HUMAN SUBJECTS, AND/OR HUMAN TISSUE, AND/OR HUMAN CELL LINES? [If yes, explain in item 14, and indicate whether the research plan has been reviewed and approved by an Institutional Review Board (IRB).] | <input type="checkbox"/> | <input type="checkbox"/> |
| E. DOES THE PROPOSED R&D INVOLVE THE USE OF LIVE VERTEBRATE ANIMALS? (If yes, explain in item 14, and indicate whether the research plan has been reviewed and approved by an Animal Care and Use Committee.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| F. DOES THE COMPANY HAVE A PARENT COMPANY OUTSIDE THE UNITED STATES? (If yes, identify the parent company, its ultimate parent company, and the place of incorporation of parent company in item 14.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| G. IS THE COMPANY MAJORITY OWNED BY NON-U.S.CITIZENS? (If yes, explain in item 14.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| H. IS THE COMPANY SUBJECT TO CONTROL BY NON-U.S. CITIZENS? (If yes, explain in item 14.)  | <input type="checkbox"/> | <input type="checkbox"/> |

14. REMARKS (Continue on a separate sheet if necessary.)

15. DESCRIBE BRIEFLY WHY FEDERAL ASSISTANCE IS NEEDED TO EMBARK ON THIS PROPOSED PROJECT. ALSO, DESCRIBE WHAT EFFORTS WERE MADE PRIOR TO APPLYING FOR ATP FUNDING TO SECURE PRIVATE CAPITAL TO SUPPORT THIS PROJECT WHOLLY. NOTE: PROVIDING A GENERAL STATEMENT INDICATING THE UNAVAILABILITY OF PRIVATE CAPITAL IS UNACCEPTABLE.

16. AUTHORIZED COMPANY REPRESENTATIVE (Type name and title.)

17. TELEPHONE NUMBER

18. SIGNATURE

19. DATE

## **INSTRUCTIONS FOR FORM NIST-1262 (Pages 1 & 2): SINGLE-COMPANY ADVANCED TECHNOLOGY PROGRAM PROPOSAL COVER SHEET**

This form must be completed in its entirety and submitted with each single-company proposal. The authorized company representative who signs the form must have delegated fiduciary authority. By signing this form, the company representative certifies the company's commitment to pay all indirect costs and, if included as additional cost share, any direct costs; verifies the certification statements on the form; and attests to the accuracy of the proposal. The signature also signifies that the company representative has coordinated with top management within his/her own company about their commitment to the proposed project. Additionally, by signing the form, the company representative acknowledges that the proposal is being submitted with the agreement that ATP may use nongovernment reviewers if necessary. (Such reviewers are screened to eliminate conflicts of interest and are required to sign nondisclosure agreements.)

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to, a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. The reason for collecting this information is for NIST to be able to perform the appropriate technical and business reviews of an ATP proposal. The information obtained will assist in determining eligibility for federal financial assistance. Responses to the collection of information are required to be considered for an ATP award. In accordance with the ATP legislation, information that is obtained by ATP or other Department of Commerce offices on a confidential basis about business operations and trade secrets possessed by any company will be protected by the government and shall be exempt from disclosure under the Freedom of Information Act.

1. Enter the competition number as stated in the Federal Register notice.
2. Enter your employer identification number (EIN). To obtain an EIN, see <http://www.atp.nist.gov/atp/helpful.htm>, or call 1-866-816-2065.

3. Enter your Dun and Bradstreet (D&B) number. To obtain a D&B number, see <http://www.dnbmdd.com/mddi>.

4. Enter the duration of the proposed work in years and months. NOTE: The maximum duration allowed for a single company is 3 years.

5. Enter the legal name, street address, city, two-letter state abbreviation, ZIP code, and website of the organization submitting the proposal. (DO NOT USE A POST OFFICE BOX.)

6. Enter the name, telephone number, fax number, and e-mail address of the Principal Investigator at the submitting organization who is responsible for the technical portion of the proposal. Include the mailing address if it differs from that of the submitting organization.

7. Enter the name, telephone number, fax number, and e-mail address of the business manager at the submitting organization who is responsible for business matters. Include the mailing address if it differs from that of the submitting organization.

8. Enter the name, telephone number, fax number, and e-mail address of the grant/contract manager at the submitting organization who is responsible for contract/grant administrative matters. Include the mailing address if it differs from that of the submitting organization.

9. Check all boxes that apply to identify the type of organization.

10.A. In each column, enter the total amount requested from ATP for each year, and enter the total in the last column. NOTE: The maximum amount of ATP funding to a single company is \$2 million; ATP funds may only be used to fund direct costs.

10.B. In each column, enter the proposer's total cost sharing for each year, and enter the total in the last column. NOTE: Large companies must cost share at least 60 percent of the yearly total project costs (direct plus all of the indirect costs). Small and medium-sized companies must pay for all of their indirect costs and may elect to pay part of the direct costs.

10.C. In each column, enter the total for each year of the project, and enter the entire project total in the last column.

11. Enter the title of the proposal (90-character limit).

12. Enter a NONPROPRIETARY abstract of the proposed work. As part of the abstract, include a statement of the technical problem addressed in the proposal. This abstract may be used as the basis for a publicly distributed abstract should the proposal be selected for an award.

13.A. through 13.H. Answer each question by marking an "x" in the appropriate box.

13.A Self-explanatory.

13.B. If the company is delinquent on any federal debt, including debt to the Internal Revenue Service (IRS), provide in item 14 the amount of the debt, the name of the federal agency to which the debt is owed, how old the debt is, the circumstances surrounding the establishment of the debt, and why the debt has not been paid.

13.C. If this proposal or a similar proposal was submitted to or is funded by another federal agency, provide in item 14 the name of the federal agency, the date the proposal was sent to that federal agency, the name of the financial assistance program under which the proposal was submitted, the amount of federal funding requested, the name and phone number of the agency contact person, and the award number if funded.

13.D. If the proposed R&D involves the use of human subjects, human tissue, and/or cells, or information/data linked to a person, explain in item 14 and indicate whether the research plan has been reviewed and approved by an Institutional Review Board (IRB). Also list in item 14 each project participant that requires the use of human subjects and briefly explain why using human subjects is pertinent to a specific task in the proposed research plan. For further guidance, refer to the *ATP Guidelines and Documentation Requirements for*

*Research Involving Human and Animal Subjects*, available at <http://www.atp.nist.gov/atp/helpful.htm>.

13.E. If the proposed R&D involves the use of live vertebrate animals, explain in item 14 and indicate whether the research plan has been reviewed and approved by an Institutional Animal Care and Use Committee (IACUC). Also list in item 14 all project participants that require animal studies and briefly explain why using animals is pertinent to the specific task(s) in the proposed research plan.

13.F. If a company has a parent company outside the United States, identify the parent company and its place of incorporation in item 14. This includes LLCs where the ownership by foreign companies is 50 percent or more.

13.G. If a company is majority owned by individuals who are not citizens of the United States, explain in item 14.

13.H. If a company is subject to control by individuals who are not citizens of the United States, explain in item 14.

14. Provide any explanations to answers given in item 13 and any other remarks you wish to offer.

15. Describe briefly why your project needs ATP funding to embark on this project. Why is private capital not available or not possible? What efforts were made to secure internal R&D funding as well as external private capital? Be specific. Providing a general statement indicating the unavailability of private funding is unacceptable.

16. Enter the name and title of the authorized company representative submitting the proposal.

17. Enter the telephone number of the authorized company representative submitting the proposal.

18. The authorized company representative submitting the proposal must sign this form.

19. Enter the date the form is signed.

**ESTIMATED MULTI-YEAR BUDGET—SINGLE COMPANY**

|   | YEAR 1 | YEAR 2 | YEAR 3 | TOTAL |
|---|--------|--------|--------|-------|
| <b>1. OBJECT CLASS CATEGORY</b>                   |        |        |        |       |
| A. Personnel salaries/wages                       | \$     | \$     | \$     | \$    |
| B. Fringe benefits                                |        |        |        |       |
| C. Travel   |        |        |        |       |
| D. Equipment                                      |        |        |        |       |
| E. Materials/supplies                             |        |        |        |       |
| F. Subcontracts                                   |        |        |        |       |
| G. Other  |        |        |        |       |
| H. Total direct costs (lines A thru G)            |        |        |        |       |
| I. Total direct costs requested from ATP          |        |        |        |       |
| J. Total direct costs shared by proposer (if any) | \$     | \$     | \$     | \$    |
| K. Total indirect costs absorbed by proposer      | \$     | \$     | \$     | \$    |
| L. Total costs (lines H + K)                      | \$     | \$     | \$     | \$    |
| <b>2. SOURCES OF FUNDS</b>                        |        |        |        |       |
| A. ATP (same as line I)                           | \$     | \$     | \$     | \$    |
| B.  |        |        |        |       |
| C.  |        |        |        |       |
| D.  |        |        |        |       |
| E. Total sources of funds (same as line L)        | \$     | \$     | \$     | \$    |
| <b>3. TASKS</b>                                   |        |        |        |       |
| A.  | \$     | \$     | \$     | \$    |
| B.  |        |        |        |       |
| C.  |        |        |        |       |
| D.  |        |        |        |       |
| E.  |        |        |        |       |
| F.  |        |        |        |       |
| G.  |        |        |        |       |
| H.  |        |        |        |       |
| I.  |        |        |        |       |
| J.  |        |        |        |       |
| K. Total costs of all tasks (same as line L)      | \$     | \$     | \$     | \$    |

## INSTRUCTIONS FOR FORM NIST-1262 (Page 3): ESTIMATED MULTI-YEAR BUDGET— SINGLE COMPANY

Every item must be completed and reflect estimated costs for each year of the proposed project. Include a TOTAL budget, which consolidates all of the project years' costs.

1. **OBJECT CLASS CATEGORY.** Items A through G are considered direct costs. List in each column the costs (rounded to the nearest whole dollar) associated with each object class category for each year of the proposed project. Enter the totals of the three columns in the last column.

A. Personnel Salaries/Wages—Enter the total salaries of full- and part-time employee's who will be working on the project, excluding fringe benefits. Do not include consultants or temps under this category; they should be included under Subcontracts.

B. Personnel Fringe Benefits—Enter the total fringe benefits (vacation; sick and military leave; health and life insurance; retirement; social security; etc.) associated with the personnel.

C. Travel—Enter the costs for transportation, including airfare, taxis, lodging, subsistence, etc.

D. Equipment—Enter the costs for general items of equipment. Costs must be prorated if equipment or facilities will not be 100 percent dedicated to the ATP project during the project period.

E. Materials/Supplies—Enter the costs for expendable materials and supplies.

F. Subcontracts—Enter the costs for subcontracts/consultants. NOTE: Single companies may not subcontract to another part of the same company or to another company with identical ownership.

G. Other—Enter the costs for any other direct costs that do not fit into the direct categories above. The cost of the project audit should also be included in this category unless it is part of the indirect costs or to be performed by a cognizant federal audit agency. Audits must be performed in accordance with the NIST Program-Specific Audit Guidelines for ATP Cooperative Agreements With Single Companies (<http://www.atp.nist.gov/atp/helpful.htm>). Audits must be conducted by an external auditor (CPA or a cognizant federal audit agency). For awards less than 24 months, an audit is required at the end of the project; for 2- and 3-year awards, an audit is required after the first year and at the end of the project. If a recipient has never received federal funding from any federal agency, a certification will be required from a CPA to determine whether the recipient has a functioning financial management system that meets the provisions of 15 C.F.R. § 14.21. The CPA costs may be included in this category unless they are part of the indirect costs.

H. Total Direct Costs—Enter total direct costs.

I. Total Direct Costs Requested From ATP—Enter the amount of direct costs requested from ATP.

J. Total Direct Costs Shared by Proposer—Enter direct costs, if any, to be shared by the proposer. Proposer will be bound to any direct cost share amount/percentage, if selected for funding.

K. Total Indirect Costs Absorbed by Proposer—Enter the total indirect costs to be charged to the proposed project. An indirect cost is any cost not directly identified with a single, final cost objective but identified with two or more final cost objectives or an intermediate cost objective. After direct costs have been determined and charged directly to the project or other work, indirect costs are those remaining to be allocated to the several cost objectives. Because of the diverse characteristics and accounting practices, it is not possible to specify the types of costs that may be classified as indirect costs in all situations. However, typical examples of indirect costs for many organizations include general administration, such as the salaries and expenses of executive officers; rent; utilities; personnel administration; maintenance; library expenses; and accounting. ATP shall interpret indirect costs in accordance with applicable federal cost principles.

L. Total Costs—Enter the total costs for the proposed R&D project.

### 2. SOURCES OF FUNDS

A.–D. List in the left-most column all sources of support (ATP first), and enter associated costs in the appropriate columns. Examples of non ATP sources of funds include company, state/local government, etc. Enter the totals of the rows in the last column.

E. Total Sources of Funds—Enter the total sources of funds in each column for each year (12-month period) of activity.

### 3. TASKS

A.–J. List in the left-most column all of the proposed tasks, and enter the associated costs in the appropriate rows. Enter the totals of the rows in the last column. Tasks should be a high-level aggregation of subtasks that have costs that can be easily updated as a group on an annual basis. ATP does not prescribe the appropriate number of tasks. If you have more tasks than the lines provide, make additional copies of this sheet to show the additional tasks. Task names and amounts must correspond with those in the Gantt chart in the R&D plan discussion.

K. Total Costs of All Tasks—Enter the total costs of all of the tasks in each of the columns for each year of activity.





## **INSTRUCTIONS FOR FORM NIST-1262 (Page 4): SUBCONTRACTS**

This form must be submitted with each proposal to identify each subcontract. This form may be duplicated, as necessary, if there are additional subcontractors.

1. Enter the name, street address, city, two-letter state abbreviation, and ZIP code of the subcontractor/consultant. Also enter the name, telephone number, fax number, and e-mail address of the individual in the subcontractor/consultant organization to be contacted regarding technical portion of the proposal. If the subcontractor's/consultant's identity is still undetermined, enter "Undetermined."
2. Mark an "x" in the appropriate box or boxes that apply to the subcontractor/consultant.
3. Enter the estimated total subcontractor/consultant costs.

4. Briefly describe the scope of work to be performed by the subcontractor/consultant.

5. Mark an "x" in the appropriate box regarding whether the subcontractor/consultant will be selected on a sole-source basis. Subcontractors/consultants should be selected on a competitive basis. If "YES" is marked, that is, if a subcontractor/consultant is selected on a sole-source basis, provide a brief justification for selection on a noncompetitive basis. Explain why this subcontractor/consultant is the only one that can perform the work and the nature of its unique capability/experience.

6. If the subcontractor/consultant has any financial or other interest in the submitting organization, briefly explain what type and how much.

7. If the submitting organization has any financial or other interest in the subcontractor/consultant, briefly explain what type and how much.



13. CERTIFICATION: BY SIGNING THIS PROPOSAL COVER SHEET, I CERTIFY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL INFORMATION IN THIS PROPOSAL IS TRUE AND CORRECT AND THAT THE FOLLOWING QUESTIONS HAVE BEEN TRUTHFULLY ANSWERED:

|   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| A. IS THIS PROPOSAL REQUESTING FUNDING FOR EXISTING OR PLANNED RESEARCH PROJECTS THAT WOULD BE CONDUCTED IN THE SAME TIME PERIOD IN THE ABSENCE OF FINANCIAL ASSISTANCE UNDER ATP?  | <input type="checkbox"/> | <input type="checkbox"/> |
| B. ARE ANY OF THE JOINT VENTURE PARTNERS DELINQUENT ON ANY FEDERAL DEBT? (If yes, explain in item 14.)  | <input type="checkbox"/> | <input type="checkbox"/> |
| C. WAS THIS PROPOSAL OR A VERY SIMILAR PROPOSAL SUBMITTED TO ANOTHER FEDERAL AGENCY? (If yes, explain in item 14.)  | <input type="checkbox"/> | <input type="checkbox"/> |
| D. DOES THE PROPOSED R&D INVOLVE THE USE OF HUMAN SUBJECTS, AND/OR HUMAN TISSUE, AND/OR HUMAN CELL LINES? [If yes, explain in item 14, and indicate whether the research plan has been reviewed and approved by an Institutional Review Board (IRB).] | <input type="checkbox"/> | <input type="checkbox"/> |
| E. DOES THE PROPOSED R&D INVOLVE THE USE OF LIVE VERTEBRATE ANIMALS? (If yes, explain in item 14, and indicate whether the research plan has been reviewed and approved by an Animal Care and Use Committee.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| F. DO ANY OF THE JOINT VENTURE PARTNERS HAVE A PARENT COMPANY OUTSIDE THE UNITED STATES? (If yes, identify the partner(s), ultimate parent company or companies, and place(s) of incorporation of parent company or companies in item 14.)            | <input type="checkbox"/> | <input type="checkbox"/> |
| G. ARE ANY OF THE JOINT VENTURE PARTNERS MAJORITY OWNED BY NON-U.S. CITIZENS? (If yes, explain in item 14.)   | <input type="checkbox"/> | <input type="checkbox"/> |
| H. ARE ANY OF THE JOINT VENTURE PARTNERS SUBJECT TO CONTROL BY NON-U.S. CITIZENS? (If yes, explain in item 14.)   | <input type="checkbox"/> | <input type="checkbox"/> |

14. REMARKS (Continue on a separate sheet if necessary.)

15. DESCRIBE BRIEFLY WHY FEDERAL ASSISTANCE IS NEEDED FOR THIS JOINT VENTURE TO FORM, OR WHY AN EXISTING JOINT VENTURE REQUIRES FEDERAL ASSISTANCE TO EMBARK ON THIS PROPOSED PROJECT. ALSO, DESCRIBE WHAT EFFORTS WERE MADE PRIOR TO APPLYING FOR ATP FUNDING TO SECURE PRIVATE CAPITAL TO SUPPORT THIS PROJECT WHOLLY. NOTE: PROVIDING A GENERAL STATEMENT INDICATING THE UNAVAILABILITY OF PRIVATE CAPITAL IS UNACCEPTABLE.

16. AUTHORIZED COMPANY REPRESENTATIVE (Type name and title.)

17. TELEPHONE NUMBER

18. SIGNATURE

19. DATE

## INSTRUCTIONS FOR FORM NIST-1263 (Pages 1 & 2): JOINT VENTURE ADVANCED TECHNOLOGY PROGRAM PROPOSAL COVER SHEET

This form must be completed in its entirety and submitted with each joint venture proposal. The authorized company representative who signs the form must have delegated fiduciary authority. By signing this form, the company representative certifies the commitment of cost sharing, verifies the certification statements on the form, and attests to the accuracy of the proposal. The signature also signifies that the company representative has coordinated with top management within his/her own company and with all companies/organizations described as joint venture partners about their commitment and cost sharing to the proposed project. Additionally, by signing the form, the company representative acknowledges that the proposal is being submitted with the agreement that ATP may use nongovernment reviewers if necessary. (Such reviewers are screened to eliminate conflicts of interest and are required to sign nondisclosure agreements.)

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to, a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. The reason for collecting this information is for NIST to be able to perform the appropriate technical and business reviews of an ATP proposal. The information obtained will assist in determining eligibility for federal financial assistance. Responses to the collection of information are required to be considered for an ATP award. In accordance with the ATP legislation, information that is obtained by ATP or other Department of Commerce offices on a confidential basis about business operations and trade secrets possessed by any company will be protected by the government and shall be exempt from disclosure under the Freedom of Information Act.

1. Enter the competition number as stated in the Federal Register notice.
2. Enter your employer identification number (EIN). To obtain an EIN, see <http://www.atp.nist.gov/atp/helpful.htm>, or call 1-866-816-2065.
3. Enter your Dun and Bradstreet (D&B) number. To obtain a D&B number, see <http://www.dnbmdd.com/mddi>.

4. Enter the duration of the proposed work in years and months. NOTE: The maximum duration allowed for a joint venture is 5 years.
5. Enter the legal name, street address, city, two-letter state abbreviation, ZIP code, and website of the organization submitting the proposal. (DO NOT USE A POST OFFICE BOX.) NOTE: The names and information on the other joint venture participants should be identified on Form NIST-1263 (Page 4), Other Joint Venture Participants.
6. Enter the name, telephone number, fax number, and e-mail address of the Principal Investigator at the submitting organization who is responsible for the technical portion of the proposal. Include the mailing address if it differs from that of the submitting organization.
7. Enter the name, telephone number, fax number, and e-mail address of the business manager at the submitting organization who is responsible for business matters. Include the mailing address if it differs from that of the submitting organization.
8. Enter the name, telephone number, fax number, and e-mail address of the grant/contract manager at the submitting organization responsible for contract/grant administrative matters. Include the mailing address if it differs from that of the submitting organization.
9. Check all boxes that apply to identify the type of organization.
  - 10.A. In each column, enter total amounts requested from ATP for each year, and enter the total in the last column. NOTE: The ATP funding requested must be less than 50 percent of the total project costs.
  - 10.B. In each column, enter the proposer's (joint venture's) total cost sharing for each year, and enter the total in the last column. NOTE: Joint ventures must provide more than 50 percent of each year's total costs.
  - 10.C. In each column, enter the total for each year of the project, and enter the entire project total in the last column.
11. Enter the title of the proposal (90-character limit).

12. Enter a NONPROPRIETARY abstract of the proposed work. As part of the abstract, include a statement of the technical problem addressed in the proposal. This abstract may be used as the basis for a publicly distributed abstract should the proposal be selected for an award.

13.A. through 13.H. Answer each question by marking an "x" in the appropriate box.

A. Self-explanatory.

B. If any of the joint venture participants is delinquent on any federal debt, including debt to the Internal Revenue Service, provide in item 14 the amount of the debt, the name of the federal agency to which the debt is owed, how old the debt is, the circumstances surrounding the establishment of the debt, and why the debt has not been paid.

C. If this proposal or a similar proposal was submitted to or is funded by another federal agency, provide in item 14 the name of the federal agency, the date the proposal was sent to that federal agency, the name of the financial assistance program under which the proposal was submitted, the amount of federal funding requested, the name and phone number of the agency contact person, and the award number if funded.

D. If the proposed R&D involves the use of human subjects, human tissue, and/or cells, or information/data linked to a person, explain in item 14 and indicate whether the research plan has been reviewed and approved by an Institutional Review Board (IRB). Also list in item 14 each project participant that requires the use of human subjects and briefly explain why using human subjects is pertinent to a specific task in the proposed research plan. For further guidance, refer to the *ATP Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*, available at <http://www.atp.nist.gov/atp/helpful.htm>.

E. If the proposed R&D involves the use of live vertebrate animals, explain in item 14 and indicate

whether the research plan has been reviewed and approved by an Institutional Animal Care and Use Committee (IACUC). Also list in item 14 all project participants that require animal studies and briefly explain why using animals is pertinent to the specific task(s) in the proposed research plan.

F. If any joint venture partner has a parent company outside the United States, identify the parent company or companies and their place of incorporation in item 14. This includes LLCs where the ownership by foreign companies is 50 percent or more.

G. If any joint venture partner is majority owned by individuals who are not citizens of the United States, explain in item 14.

H. If any joint venture partner is subject to control by individuals who are not citizens of the United States, explain in item 14.

14. Provide any explanations to answers given in item 13 and any other remarks you wish to offer.

15. Describe why your project needs ATP funding for the industry to form a joint venture or why an existing joint venture requires federal assistance to embark on this project. Why is private capital not available or not possible? What efforts were made to secure internal R&D funding as well as external private capital? Be specific. Providing a general statement indicating the unavailability of private funding is unacceptable.

16. Enter the name and title of the authorized company representative submitting the proposal on behalf of the joint venture.

17. Enter the telephone number of the authorized company representative submitting the proposal on behalf of the joint venture.

18. The authorized company representative submitting the proposal must sign this form.

19. Enter the date the form is signed.

**ESTIMATED MULTI-YEAR BUDGET—JOINT VENTURE**

YEAR: \_\_\_\_\_

| SPECIFY NAME OF PARTICIPANT:                 | PARTICIPANT | PARTICIPANT | PARTICIPANT | PARTICIPANT | PARTICIPANT | TOTAL |
|--|-------------|-------------|-------------|-------------|-------------|-------|
| <b>1. OBJECT CLASS CATEGORY</b>              |             |             |             |             |             |       |
| A. Personnel salaries/wages                  | \$          | \$          | \$          | \$          | \$          | \$    |
| B. Fringe benefits                           |             |             |             |             |             |       |
| C. Travel                                    |             |             |             |             |             |       |
| D. Equipment                                 |             |             |             |             |             |       |
| E. Materials/supplies                        |             |             |             |             |             |       |
| F. Subcontracts                              |             |             |             |             |             |       |
| G. Other                                     |             |             |             |             |             |       |
| H. Total direct costs (lines A thru G)       |             |             |             |             |             |       |
| I. Total indirect costs                      |             |             |             |             |             |       |
| J. Total costs (lines H + I)                 | \$          | \$          | \$          | \$          | \$          | \$    |
| K. Non-ATP funds                             | \$          | \$          | \$          | \$          | \$          | \$    |
| L. ATP funds requested                       | \$          | \$          | \$          | \$          | \$          | \$    |
| <b>2. SOURCES OF FUNDS</b>                   |             |             |             |             |             |       |
| A. ATP (same as line L)                      | \$          | \$          | \$          | \$          | \$          | \$    |
| B.   |             |             |             |             |             |       |
| C.   |             |             |             |             |             |       |
| D.   |             |             |             |             |             |       |
| E. Total sources of funds (same as line J)   | \$          | \$          | \$          | \$          | \$          | \$    |
| <b>3. TASKS</b>                              |             |             |             |             |             |       |
| A.   | \$          | \$          | \$          | \$          | \$          | \$    |
| B.   |             |             |             |             |             |       |
| C.   |             |             |             |             |             |       |
| D.   |             |             |             |             |             |       |
| E.   |             |             |             |             |             |       |
| F.   |             |             |             |             |             |       |
| G.   |             |             |             |             |             |       |
| H.   |             |             |             |             |             |       |
| I.   |             |             |             |             |             |       |
| J.   |             |             |             |             |             |       |
| K. Total costs of all tasks (same as line J) | \$          | \$          | \$          | \$          | \$          | \$    |

## INSTRUCTIONS FOR FORM NIST-1263 (Page 3): ESTIMATED MULTI-YEAR BUDGET— JOINT VENTURE

Every item must be completed and reflect estimated costs for each year of the proposed project. This form may be duplicated, as necessary, depending on the duration of the project and the number of participants. Specify the year on each page at the top right-hand block as noted and the name of each participant at the top of each column. Include a TOTAL budget, which consolidates all of the project years' costs.

**1. OBJECT CLASS CATEGORY.** Items A through G are considered direct costs. List in each column the costs (rounded to the nearest whole dollar) associated with each object class category for each year of the proposed project. Enter the totals of the five columns in the last column.

A. Personnel Salaries/Wages—Enter the total salaries of full- and part-time employee's who will be working on the project, excluding fringe benefits. Do not include consultants or temps under this category; they should be included under Subcontracts.

B. Personnel Fringe Benefits—Enter the total fringe benefits (vacation; sick and military leave; health and life insurance; retirement; social security; etc.) associated with the personnel.

C. Travel—Enter the costs for transportation, including airfare, taxis, lodging, subsistence, etc.

D. Equipment—Enter the costs for general items of equipment. Costs must be prorated if equipment or facilities will not be 100 percent dedicated to the ATP project during the project period.

E. Materials/Supplies—Enter the costs for expendable materials and supplies.

F. Subcontracts—Enter the costs for subcontracts/consultants. NOTE: Joint venture participants may not subcontract to another part of the same company or to another company with identical ownership.

G. Other—Enter the costs for any other direct costs that do not fit into the direct categories above. The cost of the project audit should also be included in this category unless it is part of the indirect costs or to be performed by a cognizant federal audit agency. Audits must be performed in accordance with the NIST Program-Specific Audit Guidelines for the ATP Cooperative Agreements With Joint Ventures (<http://www.atp.nist.gov/atp/helpful.htm>). For nonprofit organizations subject to OMB Circular A-133, Audits of States, Local Government, and Non-Profit Organizations (<http://www.atp.nist.gov/atp/helpful.htm>), the annual Circular A-133 audit is deemed to meet the ATP audit requirement. Audits must be conducted by an external auditor (CPA or cognizant federal audit agency). For awards of less than 24 months, an audit is required at the end of the project; for 2-, 3-, or 4-year awards, an audit is required after the first year and at the end of the project; for 5-year awards, an audit is required after the first year and the third year and at the end of the project. If a recipient has never received federal funding from any federal agency, a certification will be required from a CPA to determine whether the recipient has a functioning financial management system that meets the provisions

of 15 C.F.R. § 14.21. The CPA costs may be included in this category unless they are part of the indirect costs.

H. Total Direct Costs—Enter total direct costs.

I. Total Indirect Costs—Enter the total indirect costs to be charged to the proposed project. An indirect cost is any cost not directly identified with a single, final cost objective but identified with two or more final cost objectives or an intermediate cost objective. After direct costs have been determined and charged directly to the project or other work, indirect costs are those remaining to be allocated to the several cost objectives. Because of the diverse characteristics and accounting practices it is not possible to specify the types of costs that may be classified as indirect costs in all situations. However, typical examples of indirect costs for many organizations include general administration, such as the salaries and expenses of executive officers; rent; utilities; personnel administration; maintenance; library expenses; and accounting. ATP shall interpret indirect costs in accordance with applicable federal cost principles.

J. Total Costs—Enter the total costs for the proposed R&D project.

K. Non-ATP Funds—Enter the total non-ATP funds (i.e., funds provided by each participant, state/local sources, and other private sources). NOTE: The total non-ATP funds must be more than 50 percent of the total project costs for each year's total costs.

L. ATP Funds Requested—Enter the total amount requested from ATP. NOTE: The ATP funding requested must be less than 50 percent of the total project costs for each year's total costs.

### 2. SOURCES OF FUNDS

A.–D. List in the left-most column all sources of support individually (ATP first), and enter associated costs in the appropriate columns. Examples of non ATP sources of funds include each participant, state/local government, etc. Enter totals of the rows in the last column.

E. Total Sources of Funds—Enter the total sources of funds in each column for each year (12-month period) of activity.

### 3. TASKS

A.–J. List in the left-most column all of the proposed tasks, and enter the associated costs in the appropriate columns. Enter the totals of the rows in the last column. Tasks should be a high-level aggregation of subtasks that have costs that can be easily updated as a group on an annual basis. ATP does not prescribe the appropriate number of tasks. If you have more tasks than the lines provide, make additional copies of this sheet to show the additional tasks. Task names and amounts must correspond with those in the Gantt chart in the R&D plan discussion.

K. Total Costs of All Tasks—Enter the total costs of all of the tasks in each of the columns for each year of activity.



**OTHER JOINT VENTURE PARTICIPANTS (DO NOT INCLUDE SUBMITTING ORGANIZATION)****1. LEGAL NAME, ADDRESS AND WEBSITE OF PARTICIPANT**PHONE:  
FAX:  
E-MAIL:**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2.)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT—SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT—MEDIUM BUSINESS |  |
| <input type="checkbox"/> PROFIT—LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> NONPROFIT ORGANIZATION |  |
| <input type="checkbox"/> UNIVERSITY             |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY  |  |

**3. EMPLOYEE IDENTIFICATION NUMBER  
(EIN)****4. DUN AND BRADSTREET NUMBER****1. LEGAL NAME, ADDRESS AND WEBSITE OF PARTICIPANT**PHONE:  
FAX:  
E-MAIL:**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2.)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT—SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT—MEDIUM BUSINESS |  |
| <input type="checkbox"/> PROFIT—LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> NONPROFIT ORGANIZATION |  |
| <input type="checkbox"/> UNIVERSITY             |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY  |  |

**3. EMPLOYEE IDENTIFICATION NUMBER  
(EIN)****4. DUN AND BRADSTREET NUMBER****1. LEGAL NAME, ADDRESS AND WEBSITE OF PARTICIPANT**PHONE:  
FAX:  
E-MAIL:**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2.)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT—SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT—MEDIUM BUSINESS |  |
| <input type="checkbox"/> PROFIT—LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> NONPROFIT ORGANIZATION |  |
| <input type="checkbox"/> UNIVERSITY             |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY  |  |

**3. EMPLOYEE IDENTIFICATION NUMBER  
(EIN)****4. DUN AND BRADSTREET NUMBER****1. LEGAL NAME, ADDRESS AND WEBSITE OF PARTICIPANT**PHONE:  
FAX:  
E-MAIL:**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2.)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT—SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT—MEDIUM BUSINESS |  |
| <input type="checkbox"/> PROFIT—LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> NONPROFIT ORGANIZATION |  |
| <input type="checkbox"/> UNIVERSITY             |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY  |  |

**3. EMPLOYEE IDENTIFICATION NUMBER  
(EIN)****4. DUN AND BRADSTREET NUMBER**

## **INSTRUCTIONS FOR FORM NIST-1263 (Page 4): OTHER JOINT VENTURE PARTICIPANTS**

This form must be submitted with each joint venture proposal to identify the joint venture participants (excluding the organization submitting the proposal since that information is provided on page 1 of the Form NIST-1263). This form may be duplicated, as necessary, if there are additional participating organizations. Categories of joint venture participants are not adequate identification. For example, do not list a “manufacturing company,” a “university,” or a “hospital.” You must provide the legal name and contact information of each joint venture participant. Include only those organizations to be bound by the Joint Venture Agreement. Do not list subcontractors on this form, as information about proposed subcontractors should be provided on page 5 of NIST-1263. Additionally, do not list informal collaborators.

1. Enter the legal name and street address, city, two-letter state abbreviation, ZIP code, and website of the participant. (DO NOT USE A POST OFFICE BOX.) Also enter the name, telephone number, fax number, and e-mail address of the individual in the participant’s organization to be contacted regarding the technical portion of the proposal.

2. Check all the boxes that apply to identify the type of organization.

3. Enter participant’s employer identification number (EIN). To obtain an EIN, see <http://www.atp.nist.gov/atp/helpful.htm>, or call 1-866-816-2065.

4. Enter participant’s Dun and Bradstreet (D&B) number. To obtain a D&B number, see <http://www.dnbmdd.com/mddi>.

**SUBCONTRACTS****1. NAME AND ADDRESS OF SUBCONTRACTOR**

ORG:  
 ADDRESS 1:  
 ADDRESS 2:  
 CITY:  
 STATE: ZIP:  
 NAME OF CONTACT  
 FIRST NAME:  
 LAST NAME:  
 SUFFIX:  
 PHONE:  
 FAX:  
 E-MAIL:

**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT - SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT - MEDIUM BUSINESS | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> PROFIT - LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-LOCATED<br>ORGANIZATION         |
| <input type="checkbox"/> NONPROFIT ORGANIZATION   |  |
| <input type="checkbox"/> UNIVERSITY               |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY    |  |

**3. ESTIMATED AMOUNT OF SUBCONTRACT****4. DESCRIBE SCOPE OF WORK AND IDENTIFY WHICH TASK OR TASKS IN R&D PLAN REQUIRE SUBCONTRACTOR'S INVOLVEMENT.****5. IS THIS A SOLE-SOURCE SUBCONTRACT?**

NO  YES (If yes, explain why this subcontractor is the only one that can perform the work and the nature of its unique capability/experience.)

**6. DOES THE SUBCONTRACTOR HAVE ANY FINANCIAL OR OTHER INTEREST IN THE SUBMITTING ORGANIZATION?**

NO  YES (If yes, briefly explain what type and how much.)

**7. DOES THE SUBMITTING ORGANIZATION HAVE ANY FINANCIAL OR OTHER INTEREST IN THE SUBCONTRACTOR?**

NO  YES (If yes, briefly explain what type and how much.)

**1. NAME AND ADDRESS OF SUBCONTRACTOR**

ORG:  
 ADDRESS 1:  
 ADDRESS 2:  
 CITY:  
 STATE: ZIP:  
 NAME OF CONTACT  
 FIRST NAME:  
 LAST NAME:  
 SUFFIX:  
 PHONE:  
 FAX:  
 E-MAIL:

**2. ORGANIZATION TYPE (Mark one in column 1 and any that apply in column 2)**

- |   |  |
|---|--|
| <input type="checkbox"/> PROFIT - SMALL BUSINESS  | <input type="checkbox"/> PUBLIC COMPANY<br>(Ticker symbol _____) |
| <input type="checkbox"/> PROFIT - MEDIUM BUSINESS | <input type="checkbox"/> FOREIGN-OWNED,<br>U.S.-LOCATED COMPANY  |
| <input type="checkbox"/> PROFIT - LARGE BUSINESS  | <input type="checkbox"/> FOREIGN-LOCATED<br>ORGANIZATION         |
| <input type="checkbox"/> NONPROFIT ORGANIZATION   |  |
| <input type="checkbox"/> UNIVERSITY               |  |
| <input type="checkbox"/> GOVERNMENT LABORATORY    |  |

**3. ESTIMATED AMOUNT OF SUBCONTRACT****4. DESCRIBE SCOPE OF WORK AND IDENTIFY WHICH TASK OR TASKS IN R&D PLAN REQUIRE SUBCONTRACTOR'S INVOLVEMENT.****5. IS THIS A SOLE-SOURCE SUBCONTRACT?**

NO  YES (If yes, explain why this subcontractor is the only one that can perform the work and the nature of its unique capability/experience.)

**6. DOES THE SUBCONTRACTOR HAVE ANY FINANCIAL OR OTHER INTEREST IN THE SUBMITTING ORGANIZATION?**

NO  YES (If yes, briefly explain what type and how much.)

**7. DOES THE SUBMITTING ORGANIZATION HAVE ANY FINANCIAL OR OTHER INTEREST IN THE SUBCONTRACTOR?**

NO  YES (If yes, briefly explain what type and how much.)

## INSTRUCTIONS FOR FORM NIST-1263 (Page 5): SUBCONTRACTS

This form must be submitted with each proposal to identify each subcontract. This form may be duplicated, as necessary, if there are additional subcontractors.

1. Enter the name, street address, city, two-letter state abbreviation, and ZIP code of the subcontractor/consultant. Also enter the name, telephone number, fax number, and e-mail address of the individual in the subcontractor/consultant organization to be contacted regarding technical portion of the proposal. If a subcontractor's/consultant's identity is still undetermined, enter "Undetermined."
2. Mark an "x" in the appropriate box or boxes that apply to the subcontractor/consultant.
3. Enter the estimated total subcontractor/consultant costs.
4. Briefly describe the scope of work and identify which task(s) in the R&D plan will be performed by the subcontractor/consultant.

5. Mark an "x" in the appropriate box regarding whether the subcontractor/consultant will be selected on a sole-source basis. Subcontractors/consultants should be selected on a competitive basis. If "YES" is marked, that is, if the subcontractor/consultant is selected on a sole-source basis, provide a brief justification for selection on a noncompetitive basis. Explain why this subcontractor/consultant is the only one that can perform the work and the nature of its unique capability/experience.

6. If the subcontractor/consultant has any financial or other interest in the submitting organization or any other joint venture participant, briefly explain what type and how much.

7. If the submitting organization or any other joint venture participant has any financial or other interest in the subcontractor/consultant, briefly explain what type and how much.

APPLICATION FOR FEDERAL ASSISTANCE

SF 424 (R&R)

|   |  |
|---|--|
| <b>2. DATE SUBMITTED</b><br>[ ]         | <b>Applicant Identifier</b><br>[ ]         |
| <b>3. DATE RECEIVED BY STATE</b><br>[ ] | <b>State Application Identifier</b><br>[ ] |
| <b>4. Federal Identifier</b><br>[ ]     |  |

1. \* TYPE OF SUBMISSION

- Pre-application     Application  
 Changed/Corrected Application

5. APPLICANT INFORMATION

\* Organizational DUNS: [ ]

\* Legal Name: [ ]

Department: [ ]    Division: [ ]

\* Street1: [ ]    Street2: [ ]

\* City: [ ]    County: [ ]    \* State: [ ]    \* ZIP Code: [ ]

\* Country: [ ]

Person to be contacted on matters involving this application

Prefix: [ ]    \* First Name: [ ]    Middle Name: [ ]    \* Last Name: [ ]    Suffix: [ ]

\* Phone Number: [ ]    Fax Number: [ ]    Email: [ ]

6. \* EMPLOYER IDENTIFICATION (EIN) or (TIN):

[ ]

7. \* TYPE OF APPLICANT:

Please select one of the following

Other (Specify):

Small Business Organization Type

Women Owned

Socially and Economically Disadvantaged

8. \* TYPE OF APPLICATION:

- New  
 Resubmission     Renewal     Continuation     Revision

If Revision, mark appropriate box(es).

- A. Increase Award     B. Decrease Award     C. Increase Duration  
 D. Decrease Duration     E. Other (specify):

9. \* NAME OF FEDERAL AGENCY:

[ ]

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:

[ ]

TITLE: [ ]

11. \* DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

[ ]

12. \* AREAS AFFECTED BY PROJECT (cities, counties, states, etc.)

[ ]

13. PROPOSED PROJECT:

\* Start Date [ ]    \* Ending Date [ ]

14. CONGRESSIONAL DISTRICTS OF:

a. \* Applicant [ ]    b. \* Project [ ]

15. PROJECT DIRECTOR/PRINCIPAL INVESTIGATOR CONTACT INFORMATION

Prefix: [ ]    \* First Name: [ ]    Middle Name: [ ]    \* Last Name: [ ]    Suffix: [ ]

Position/Title: [ ]    \* Organization Name: [ ]

Department: [ ]    Division: [ ]

\* Street1: [ ]    Street2: [ ]

\* City: [ ]    County: [ ]    \* State: [ ]    \* ZIP Code: [ ]

\* Country: [ ]

\* Phone Number: [ ]    Fax Number: [ ]    \* Email: [ ]

16. ESTIMATED PROJECT FUNDING

a. \* Total Estimated Project Funding

b. \* Total Federal & Non-Federal Funds

c. \* Estimated Program Income

17. \* IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES  THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:  
DATE: \_\_\_\_\_

b. NO  PROGRAM IS NOT COVERED BY E.O. 12372; OR  
 PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

18. By signing this application, I certify (1) to the statements contained in the list of certifications\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances \* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)

\* I agree

\* The list of certifications and assurances, or an Internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

19. Authorized Representative

Prefix:  \* First Name:  Middle Name:  \* Last Name:  Suffix:

\* Position/Title:  \* Organization:

Department:  Division:

\* Street1:  Street2:

\* City:  County:  \* State:  \* ZIP Code:

\* Country:

\* Phone Number:  Fax Number:  \* Email:

**\* Signature of Authorized Representative** **\* Date Signed**

20. Pre-application

21. Attach an additional list of Project Congressional Districts if needed.

## INSTRUCTIONS FOR THE SF-424 (R&R)

The **SF-424 (R&R)** form has been adapted for use by the Advanced Technology Program (ATP) for proposals submitted to ATP. Some of the items are required and some are optional. Required items are identified with an asterisk on the form and are specified in the instructions below. These instructions are only applicable to proposals submitted to ATP.

1. Type of Submission (Required): Select Application.
2. Date Submitted/Applicant Identifier: Enter date of proposal submission. Applicant Identifier: Not applicable; leave blank.
3. Date Received by State & State Application Identifier: Not applicable; leave blank.
4. Federal Identifier: Enter one of the following numbers associated with the technology area of your proposal as described in the Federal Funding Opportunity notice:
  - 2007-A (General if none of the areas below apply)
  - 2007-B (Technologies for Advanced and Complex Systems)
  - 2007-C (Challenges in Advanced Materials and Devices)
  - 2007-D (21st Century Manufacturing)
  - 2007E (Nanotechnology)
5. Applicant Information/Organizational DUNS (Required): Enter the organization's DUNS or DUNS+4 number received from Dun and Bradstreet. Information on obtaining a DUNS number is available at <http://www.atp.nist.gov/atp/helpful.htm>. Fill in Applicant Information as requested.
6. Employer Identification (Required): Enter the Employer or Taxpayer Identification Number (EIN or TIN) as assigned by the Internal Revenue Service.
7. Type of Applicant: For electronic submissions, click on the drop-down menu and enter the appropriate type. For hardcopy submissions, enter Profit-Small Business; Profit-Medium Business; Profit-Large Business; Nonprofit Organization; Public Company (including Ticket symbol); or Foreign-Owned, U.S.-Located Company.
8. Type Of Application (Required): Select New.
9. Name Of Federal Agency (Required): For electronic submission leave as is. For hardcopy submission enter NIST.
10. Catalog Of Federal Domestic Assistance Number/Title: Enter 11.612 ATP.
11. Descriptive Title of Applicant's Project (Required): Enter a brief descriptive title of the project.
12. Areas Affected By Project: Self explanatory.
13. Proposed Project Start and End Dates (Required): Enter start and end dates of the project.
14. Congressional Districts Of (Required): Self explanatory.
15. Project Director/Principal Investigator Contact Information: Self explanatory.
16. Estimated Funding (Required): 16a. Enter amount requested from ATP, 16b. Enter Total Project Cost, 16c. Enter 0.
17. Is Application Subject to Review by State Under Executive Order 12372 Process? Select "NO Program is not covered by E.O. 12372"
18. Self explanatory.
19. Authorized Representative (Required): Self explanatory.
20. Pre-Application: Not applicable; leave blank.
21. Attach an additional list of Project Congressional Districts if needed. Self explanatory.





# RESEARCH & RELATED Other Project Information

1. \* Are Human Subjects Involved?  Yes  No

1.a If YES to Human Subjects

Is the IRB review Pending?  Yes  No

IRB Approval Date:

Exemption Number:  1  2  3  4  5  6

Human Subject Assurance Number:

2. \* Are Vertebrate Animals Used?  Yes  No

2.a. If YES to Vertebrate Animals

Is the IACUC review Pending?  Yes  No

IACUC Approval Date:

Animal Welfare Assurance Number

3. \* Is proprietary/privileged information included in the application?  Yes  No

4.a. \* Does this project have an actual or potential impact on the environment?  Yes  No

4.b. If yes, please explain:

4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed?  Yes  No

4.d. If yes, please explain:

5.a. \* Does this project involve activities outside the U.S. or partnership with International Collaborators?  Yes  No

5.b. If yes, identify countries:

5.c. Optional Explanation:

6. \* **Project Summary/Abstract**

7. \* **Project Narrative**

8. **Bibliography & References Cited**

9. **Facilities & Other Resources**

10. **Equipment**

11. **Other Attachments**

## INSTRUCTIONS FOR THE RESEARCH & RELATED OTHER PROJECT INFORMATION FORM

The **RESEARCH & RELATED Other Project Information** form has been adapted for use by the Advanced Technology Program (ATP) for proposals submitted to ATP. For electronic submissions of proposals, this is a mandatory, predefined form that you will use to **attach** the various documents that make up your proposal. For hardcopy submissions of proposals, this is also a required form. Some of the items are required and some are optional. Required items are identified with an asterisk on the form and are specified in the instructions below.

- 1.-5 For hardcopy and electronic submissions these items are self explanatory.
- 6-11 For hardcopy submissions, no further entries required; leave blank. For electronic submissions these entries are used to include the required Attachments that make up your proposal. Instructions for each item are as follows:
  6. Project Summary/Abstract: Click on Add Attachment that opens the Attach File window. Locate and highlight your completed Form NIST-1262 or NIST-1263 file that is on your computer and click on the Open button to attach this file. **NOTE: It is important that you view the file once you have attached it and verify that the information that you have entered appears and that it is not a blank document.**
  7. Project Narrative: Click on Add Attachment that opens the Attach File window. Locate and highlight your completed Project Narrative (addressing Scientific and Technological Merit and Potential for Broad-Based Economic Benefits selection criteria) file that is on your computer and click on the Open button to attach this file. **NOTE: It is important that you view the file once you have attached it and verify that the information that you have entered appears and that it is not a blank document.**
  - 8.-10. Leave blank.
  11. Other Attachments: Use item 11 to attach the various remaining documents that make up your proposal. Additional documents include:
    - a. List of bibliographic technical references supporting technical assertions and data including patent citations.
    - b. List of bibliographic references supporting business assertions and economic data.
    - c. Table of Abbreviations.
    - d. Foreign-Owned Company Questionnaire, if applicable.
    - e. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire, if applicable.
    - f. Letters of commitment, as required
    - g. Letters of support, as appropriate
    - h. Letters of corroboration, documenting efforts to secure other funding, as required.
    - i. Budget Narrative
    - j. Human and/or animal subjects documentation, if applicable.

Click on Add Attachments and the Attachments window opens. This window allows you to add multiple attachments. Next click on the Attach button. Locate and highlight one of the above listed files that you have saved on your computer and that you wish to attach to your proposal. Click Open to attach this file. Repeat this process until you have attached all of your remaining files. Once you are finished click Done. If you need to attach additional files simply click Attach again. When you have completed attaching all of your proposal attachments, click Done.

**NOTE: It is important that you view each file that you have attached and verify that**

**the information that you have entered appears on each attachment and that the attachment is not a blank document.**

When you have completed attaching all of your forms, click on the Close Form button and return to Grant Application Package.

Click on the Check for Errors button at the top of the screen and correct any errors if indicated.

Now that your application package is complete, click on the Save button at the top of the screen. This will save your application (in PureEdge format) on your computer. NOTE: if you do not save your application at this stage you may have to reenter your data and reattach your files.

When you are ready to submit your proposal application, click on the Submit button at the top of the screen. If the Submit button is

grayed out you need to click on the Check for Errors button and the Save button. Note: if your browser has a “pop-up” blocker installed, you may have to hold the Ctrl key down while clicking on the Submit button.

The next screen that appears asks you to enter your Username and password. When you enter this the next screen will ask “Do you wish to sign and submit this application?” When you are ready to do so click on the Sign and Submit Application button.

The next screen that appears is the confirmation page. This is evidence of your electronic submission to ATP through Grants.gov. Please print this page and keep it in a safe location. Click on Close to exit Grants.gov.

Congratulations! You have submitted your proposal application to ATP.



Organization Name: \_\_\_\_\_ Year: \_\_\_\_\_

**BUDGET NARRATIVE**

**NOTE:** All proposed direct and indirect costs must be consistent with costs incurred for like or similar items on all other federal and nonfederal projects or cost centers. Provide a Budget Narrative for each year of the project and for each joint venture participant. Any interorganizational transfers included in the respective object class categories that are not within the United States must be clearly identified next to the budgeted item as "Foreign Interorganizational Transfer." All figures must be rounded to the nearest dollar and correspond with those on the NIST-1262 or NIST-1263. Be sure arithmetic is correct. This form should not be altered. If additional space is needed, indicate, "continued on next page," and attach additional sheets following the same format of specific item.

**A. Personnel**—List each employee's name, if available, and position title below. Provide the annual salary and the percentage of time to be devoted to the project. Compensation paid for employees must be consistent with that paid for similar work within the proposer's organization and similar positions in the industry. Employees who are considered indirect labor should not be included in the breakdown of direct personnel costs or in item 1.A. (page 3) of Form NIST-1262 or Form NIST-1263. Escalation rates for the out-years should be reasonable. If unable to identify all of the personnel to be assigned to the project, state "To be determined" under name and use generic position titles such as "senior chemical engineer." Non-employees of the organization such as consultants and temps should NOT be included in this category but included in Section F Subcontract of this form and described on Form NIST-1262 or Form NIST-1263, pages 4 and 5, respectively.

| Employee's Name and Position Title | Annual Salary | Percentage of Time on Project | Cost               |
|------------------------------------|---------------|-------------------------------|--------------------|
|                                    |               |                               | <b>TOTAL</b> _____ |

**B. Fringe Benefits**—Identify percentage rate, and if greater than 35 percent, provide a breakdown of what makes up the fringe benefits (vacation; sick and military leave; health and life insurance; retirement; social security; etc.). If fringe benefits are normally included in the organization's indirect costs, check the box below.

Check here if included in indirect costs.

\_\_\_\_\_ Percentage Rate. If rate exceeds 35 percent, provide breakdown:

**TOTAL** \_\_\_\_\_

**C. Travel**—Provide best estimate of travel required for the project, and provide the basis of computation (i.e., item multiplied by number of people multiplied by number of trips). Note that ATP recipients are expected to adhere to government policies regarding travel, such as coach rather than first-class accommodations. Do not include travel to NIST for project review meetings, because these meetings are held at the funded organizations. Travel costs should represent a coherent part of the project’s “communications strategy” for smooth coordination among participants. While foreign travel is not precluded, it is discouraged and will require a strong justification. Likewise, conference costs are not generally considered R&D-related expenses and should not typically be included; however, if attendance is critical to performing the R&D, a strong justification must be provided (see below).

| Purpose of Travel  | Destination | Item (mode of transportation, lodging and subsistence) | Computation | Cost               |
|--|-------------|--|-------------|--------------------|
| <p>Justification for foreign travel and/or foreign conference(s) [include an explanation of how the foreign travel and/or foreign conference(s) are specifically related to the R&amp;D activities of the ATP project (i.e., how will the information gathered contribute to funded tasks), why the information cannot be obtained in the United States, and summarize conference agenda or topics for meeting with key experts (name and expertise) at the conference, etc.]:</p> |             |  |             |                    |
| <p>Justification for domestic conference(s) [include an explanation of how the conference(s) specifically relates to the R&amp;D activities of the ATP project (i.e., how will the information gathered contribute to funded task(s), summarize conference agenda or topics for meeting with key experts (name and expertise) at the conference, etc.]:</p>  |             |  |             |                    |
|  |             |  |             | <b>TOTAL</b> _____ |

**D. Equipment**—Identify each item of equipment and the methodology used to arrive at the proposed costs (i.e., historical costs, competitive bid, published price lists, or cost/price analysis), basis of computation (i.e., cost per item multiplied by number of items), and cost. In addition, be sure the need for the equipment is clearly stated in the technical plan. Budget estimates for each equipment item exceeding \$100,000 must be described and justified separately. Additionally any equipment item exceeding \$100,000 to be purchased outside the United States requires justification. Also identify by placing an asterisk on any in-kind owned equipment and its current depreciated value using the participant’s preestablished depreciation accounting methods. The value of equipment will be further prorated according to the share of total use dedicated to carrying out the proposed project. ATP funds may not be used for the construction of new buildings. ATP funds may, however, be used for construction of experimental research and development facilities to be located within a new or existing building provided that the equipment or facilities are essential for carrying out the project. If such costs are proposed, include below and provide justification. General-purpose office equipment, e.g., office computers, printers, copiers, etc., are normally included in indirect costs and therefore should not be budgeted as direct costs. If they are not included in indirect costs, they can be considered direct costs; however, they must be used exclusively for the ATP project, and a justification and explanation must be provided below. Office furniture is unallowable.

| Item   | Methodology | Computation | Cost |
|--|-------------|-------------|------|
| Justification for each equipment item exceeding \$100,000, to be purchased outside the United States, and/or any construction costs: |             |             |      |
| <b>TOTAL</b> _____   |             |             |      |

**E. Materials/Supplies**—Provide a complete breakdown of each item/type of expendable materials and supplies, methodology used to arrive at the proposed costs (i.e., historical costs, competitive bid, published price lists, or cost/price analysis), basis of computation (i.e., item multiplied by number of items), and cost. Office supplies, e.g., paper, pens, toner cartridges, etc. are normally included in indirect costs and should not be included here. If they are not included in indirect costs, they must be used exclusively for the ATP project, and a justification and explanation must be provided below.

| Item               | Methodology | Computation | Cost |
|--------------------|-------------|-------------|------|
| <b>TOTAL</b> _____ |             |             |      |

**F. Subcontracts**—For each subcontractor/consultant identified on Form NIST-1262 (page 4) or Form NIST-1263 (page 5), enter the name, if known, service to be provided, hourly or daily fee (8-hour day), and estimated time on the project. Proposers are encouraged to promote free and open competition in awarding subcontracts/consultants. NOTE: If proposing any foreign subcontractors/consultants, you must provide a completed R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire.

| Name of Subcontractor/Consultant | Service Provided | Computation | Cost |
|----------------------------------|------------------|-------------|------|
|----------------------------------|------------------|-------------|------|

If subcontractor's/consultant's fees are in excess of \$450 per day, justify here:

*Subtotal* \_\_\_\_\_

**Subcontractor Expenses:** List any expenses to be paid from the award to the individual subcontractors/consultants in addition to their fees. Office supplies and conferences/workshops for subcontractors/consultants are unallowable.

| Name of Subcontractor/Consultant | Expense | Computation | Cost |
|----------------------------------|---------|-------------|------|
|----------------------------------|---------|-------------|------|

*Subtotal* \_\_\_\_\_

**TOTAL** \_\_\_\_\_



**G. Other**—Identify and provide a detailed description of any other direct costs that do not fall into the object cost categories above, basis of computation (i.e., cost per item multiplied by number of items), and cost. The cost of the project audit should also be included in this category unless it is part of the indirect costs or to be performed by a cognizant federal audit agency. If it is part of the indirect costs, indicate it as such. Each joint venture participant should budget for an audit. Audits must be performed in accordance with the *NIST Program-Specific Audit Guidelines for ATP Cooperative Agreements With Single Companies* or the *NIST Program-Specific Audit Guidelines for ATP Cooperative Agreements With Joint Ventures*. For nonprofit organizations subject to OMB Circular A-133, Audits of States, Local Government, and Non-Profit Organizations, the annual Circular A-133 audit is deemed to meet the ATP audit requirement. All of these documents may be found at <http://.atp.nist.gov/atp/helpful.htm>. Audits must be conducted by an external auditor (CPA or cognizant federal audit agency). For awards less than 24 months, an audit is required at the end of the project; for 2-, 3-, or 4-year awards, an audit is required after the first year and at the end of the project; for 5-year awards, an audit is required after the first year and the third year and at the end of the project. If a recipient has never received federal funding from any federal agency, a certification will be required from an external auditor to determine whether the recipient has a functioning financial management system that meets the provisions of 15 C.F.R. § 14.21.

| Description  | Computation | Cost               |
|--|-------------|--------------------|
| <b>Audit</b>   |             |                    |
| <input type="checkbox"/> Check here if audit is part of indirect costs.  |             |                    |
| <input type="checkbox"/> Check here if cognizant Federal audit agency will perform audits and provide names of agency: |             |                    |
|  |             | <b>TOTAL</b> _____ |

**H. Indirect Costs**—Specify the current indirect cost rate(s) and cost. If an indirect cost rate was negotiated with a cognizant federal agency, include a copy of the approved negotiated agreement.

**Percentage Rate:** \_\_\_\_\_

- Check here if negotiated indirect cost rate agreement by a cognizant federal agency is attached.
- Check here if indirect cost rate has not been established by a cognizant federal agency.

**TOTAL** \_\_\_\_\_

**I. COST SHARING COMPOSITION**—Identify the total source of funding by cash and in-kind contributions.

Cash: \_\_\_\_\_ In-kind: \_\_\_\_\_ (In-kind contributions cannot exceed 30 percent of the nonfederal share of the total project costs. Additionally, except as specified in 15 C.F.R. § 295.25, the value of in-kind contributions should be determined in accordance with 15 C.F.R. § 14.23.)

Identify the name of the source of in-kind contribution(s), type (e.g., equipment, research tools, software, supplies, etc.), valuation method, and associated amount(s) below:

**TOTAL COST SHARE** \_\_\_\_\_



## FOREIGN-OWNED COMPANY QUESTIONNAIRE

Complete answers to all questions must be provided for each foreign-owned company participating in the proposed ATP project. Submit additional documentation, if necessary. [See Chapter 1, Section B.3.-7. in the ATP Proposal Preparation Kit for explanation.]

Title of Proposal:

Name of Submitting Organization:

1. Is the foreign-owned company incorporated in the United States, or is the LLC, partnership, or sole proprietorship with foreign ownership organized in the United States? (NOTE: A company, LLC, partnership, or sole proprietorship is considered foreign owned if it is majority owned or controlled by a non-U.S. entity, and the non-U.S. entity, or its ultimate parent, if any, is incorporated outside the United States.)

- No. You are ineligible for an ATP award. Do not continue.
- Yes. Please continue.

2. Name of foreign-owned company and U.S. address where research for the project will be conducted.

3. Name of ultimate foreign parent, address, and country of incorporation. Also provide percentage of ownership.

4. What is the type of participation of the foreign-owned company?

- Single company
- Joint venture lead company
- Joint venture participant

5. What is the role of the foreign-owned company? (Check all that apply)

- Key contributor to the high-risk tasks of the project
- Minor contributor to the high-risk tasks of the project
- Supplier of materials, equipment, or software services
- Manufacturer
- Other. Please explain.

6. What skills, capabilities, and resources does the foreign-owned company bring to the project? How will the company's role affect project milestones and the plan for commercialization?

7. Provide a brief description of:

- a. Facility or facilities where project activities will be carried out;
- b. Location;
- c. Square footage; and
- d. Special equipment.

8. How many employees will be dedicated to the project?

9. Provide the names, titles, and main responsibilities of key project staff.

10. Will there be any activities performed outside the United States?

- No.
- Yes. If yes, a completed R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire must be submitted.

11. Does the foreign-owned company expect to develop any new products or apply any new processes to its product lines incorporating the ATP supported technology?

- No.
- Yes. If yes, provide the following:
  - a. For each new product or process, when will it first occur?
  - b. Where?
  - c. If in the United States, which facility?
  - d. Which U.S. product line?
  - e. Other? Please explain.

12. a. Provide investments that the foreign-owned company has made in research, development, manufacturing, distribution, sales, and marketing in the United States during the past 3 years.

- b. State approximate dollar value.

13. Describe the relationship between the foreign-owned company and its ultimate foreign parent. Include financial arrangements, intercompany research agreements, and intellectual property arrangements. [See Chapter 1, Section F.1.-3. in the ATP Proposal Preparation Kit for explanation.]

**R&D WORK PERFORMED OUTSIDE THE UNITED STATES  
BY THE RECIPIENT OR SUBCONTRACTOR QUESTIONNAIRE**

[See Chapter 1, Section B.3.-7. in the ATP Proposal Preparation Kit for explanation.]

Title of Proposal:

Name of Submitting Organization:

Name of Company To Perform R&D Work Outside the United States:

Country Where Work Will Be Performed:

1. Why is the work to be performed outside the United States critical to the technical plan? Is the work less technically challenging and lower risk relative to the work carried out in the United States? If no, please explain.
2. Describe the impact on the economic benefits with and without the R&D being performed outside the United States.
3. What is the percentage of the total ATP project for R&D performed outside the United States?
4. What are the total dollars by organization for R&D performed outside the United States?
5. a. Explain how your organization made a good faith effort to identify alternatives to having this particular work performed outside the United States.
  - b. Explain why those alternatives were less attractive (e.g., cost, schedule, insufficient interest, or commitment).
6. Would the projected economic benefits to the United States be less likely to occur if the work outside the United States were not carried out at all, or if ATP insisted that the work be performed in the United States? Explain why.
7. Does the facility proposing to carry out the work outside the United States bring to the project special expertise, extra resources, or other factors that would represent a substantial loss to the project were they not there? Explain.
8. a. Is the company proposing to do work outside the United States U.S. owned?
  - Yes
  - No
  - b. Does the company also have R&D and manufacturing facilities in the United States that would benefit from the project? Please describe.
  - c. Who else would benefit?
9. Will the company performing the work outside the United States agree to surrender intellectual property resulting from the work to a company incorporated in the United States? [See Chapter 1, Section F.1.-3. in the ATP Proposal Preparation Kit for explanation.]



## ATP STATUTE

*NOTE: The ATP statute originated in the Omnibus Trade and Competitiveness Act of 1988 (Pub. L. 100-418, 15 U.S.C. § 278n) but was amended by the American Technology Preeminence Act of 1991 (Pub. L. 102-245). This law has been codified at 15 U.S.C. § 278n.*

**Sec. 278n. Advanced Technology Program**

(a) **Establishment; purpose; focus; guidance.** There is established in the Institute an Advanced Technology Program (hereafter in this Act referred to as the “Program”) for the purpose of assisting United States businesses in creating and applying the generic technology and research results necessary to—

- (1) commercialize significant new scientific discoveries and technologies rapidly; and
- (2) refine manufacturing technologies.

The Secretary, acting through the Director, shall assure that the Program focuses on improving the competitive position of the United States and its businesses, gives preference to discoveries and to technologies that have great economic potential, and avoids providing undue advantage to specific companies. In operating the Program, the Secretary and Director shall, as appropriate, be guided by the findings and recommendations of the Biennial National Critical Technology Reports prepared pursuant to section 603 of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. § 6683).

(b) **Authority of Secretary; research and development; contracts and cooperative agreements; Federal laboratories; other activities with joint ventures.** Under the Program established in subsection (a), and consistent with the mission and policies of the Institute, the Secretary, acting through the Director, and subject to subsections (c) and (d), may—

(1) aid industry-led United States joint research and development ventures (hereafter in this section referred to as “joint ventures”) (which may also include universities and independent research organizations), including those involving collaborative technology demonstration projects which develop and test prototype equipment and processes, through—

(A) provision of organizational and technical advice; and

(B) participation in such joint ventures by means of grants, cooperative agreements, or contracts, if the Secretary, acting through the Director, determines participation to be appropriate, which may include (i) partial startup funding, (ii) provision of a minority share of the cost of such joint ventures for up to 5 years, and (iii) making available equipment, facilities, and personnel, provided that emphasis is placed on areas where the

Institute has scientific or technological expertise, on solving generic problems of specific industries, and on making those industries more competitive in world markets;

(2) provide grants to and enter into contracts and cooperative agreements with United States businesses (especially small businesses), provided that emphasis is placed on applying the Institute’s research, research techniques, and expertise to those organizations’ research programs;

(3) involve the Federal laboratories in the Program, where appropriate, using among other authorities the cooperative research and development agreements provided for under section 12 of the Stevenson-Wylder Technology Innovation Act of 1980 [15 U.S.C. § 3710a]; and

(4) carry out, in a manner consistent with the provisions of this section, such other cooperative research activities with joint ventures as may be authorized by law or assigned to the Program by the Secretary.

(c) **Authority of Secretary; selection criteria; monitoring use of technologies; overseas transfer; annual report to Congress; financial reporting and auditing; routine consideration of Committee advice; dissemination of research results.** The Secretary, acting through the Director, is authorized to take all actions necessary and appropriate to establish and operate the Program, including—

(1) publishing in the Federal Register draft criteria and, no later than six months after the date of the enactment of this section [enacted Aug. 23, 1988], following a public comment period, final criteria, for the selection of recipients of assistance under subsection (b)(1) and (2);

(2) monitoring how technologies developed in its research program are used, and reporting annually to the Congress on the extent of any overseas transfer of these technologies;

(3) establishing procedures regarding financial reporting and auditing to ensure that contracts and awards are used for the purposes specified in this section, are in accordance with sound accounting practices, and are not funding existing or planned research programs that would be conducted in the same time period in the absence of financial assistance under the Program;

(4) assuring that the advice of the Committee established under section 10 [15 U.S.C. § 278] is considered routinely in carrying out the responsibilities of the Institute; and

(5) providing for appropriate dissemination of Program research results.

(d) **Contracts or awards; criteria; restrictions.** When entering into contracts or making awards under subsection (b), the following shall apply:

(1) No contract or award may be made until the research project in question has been subject to a merit review, and has, in the opinion of the reviewers appointed by the Director and the Secretary, acting through the Director, been shown to have scientific and technical merit.

(2) In the case of joint ventures, the Program shall not make an award unless the award will facilitate the formation of a joint venture or the initiation of a new research and development project by an existing joint venture.

(3) No Federal contract or cooperative agreement under subsection (b)(2) shall exceed \$2,000,000 over 3 years, or be for more than 3 years unless a full and complete explanation of such proposed award, including reasons for exceeding these limits, is submitted in writing by the Secretary to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives. The proposed contract or cooperative agreement may be executed only after 30 calendar days on which both Houses of Congress are in session have elapsed since such submission. Federal funds made available under subsection (b)(2) shall be used only for direct costs and not for indirect costs, profits, or management fees of the contractor.

(4) In determining whether to make an award to a particular joint venture, the Program shall consider whether the members of the joint venture have made provisions for the appropriate participation of small United States businesses in such joint venture.

(5) Section 552 of title 5, United States Code, shall not apply to the following information obtained by the Federal Government on a confidential basis in connection with the activities of any business or any joint venture receiving funding under the Program—

(A) information on the business operation of any member of the business or joint venture; and

(B) trade secrets possessed by any business or any member of the joint venture.

(6) Intellectual property owned and developed by any business or joint venture receiving funding or by any member of such a joint venture may not be disclosed by any officer or employee of the Federal Government except in accordance with a written agreement between the owner or developer and the Program.

(7) If a business or joint venture fails before the completion of the period for which a contract or award has been made, after all allowable costs have been paid and appropriate audits conducted, the unspent balance of the Federal funds shall be returned by the recipient to the Program.

(8) Upon dissolution of any joint venture or at the time otherwise agreed upon, the Federal Government shall be entitled to a share of the residual assets of the joint venture proportional to the Federal share of the costs of the joint venture as determined by independent audit.

(9) A company shall be eligible to receive financial assistance under this section only if—

(A) the Secretary finds that the company's participation in the program would be in the economic interest of the United States, as evidenced by investments in the United States in research, development, and manufacturing (including, for example, the manufacture of major components or subassemblies in the United States); significant contributions to employment in the United States; and agreement with respect to any technology arising from assistance provided under this section to promote the manufacture within the United States of products resulting from that technology (taking into account the goals of promoting the competitiveness of United States industry), and to procure parts and materials from competitive suppliers; and

(B) either—

(i) the company is a United States-owned company; or

(ii) the Secretary finds that the company is incorporated in the United States and has a parent company which is incorporated in a country which affords to United States-owned companies opportunities, comparable to those afforded to any other company, to participate in any joint venture similar to those authorized under this Act; affords to United States-owned companies local investment opportunities comparable to those afforded to any other company; and affords adequate and effective protection for the intellectual property rights of United States-owned companies.

(10) Grants, contracts, and cooperative assignments under this section shall be designed to support projects which are high risk and which have the potential for eventual substantial widespread commercial application. In order to receive a grant, contract, or cooperative agreement under this section, a research and development entity shall demonstrate to the Secretary the requisite ability in research and technology development and management in the project area in which the grant, contract, or cooperative agreement is being sought.

(11) (A) Title to any intellectual property arising from assistance provided under this section shall vest in a company or companies incorporated in the United States.



The United States may reserve a nonexclusive, nontransferable, irrevocable paid-up license, to have practiced for or on behalf of the United States, in connection with any such intellectual property, but shall not, in the exercise of such license, publicly disclose proprietary information related to the license. Title to any such intellectual property shall not be transferred or passed, except to a company incorporated in the United States, until the expiration of the first patent obtained in connection with such intellectual property.

(B) For purposes of this paragraph, the term “intellectual property” means an invention patentable under title 35, United States Code, or any patent on such an invention.

(C) Nothing in this paragraph shall be construed to prohibit the licensing to any company of intellectual property rights arising from assistance provided under this section.

(e) **Suspension for failure to satisfy eligibility criteria.** The Secretary may, within 30 days after notice to Congress, suspend a company or joint venture from continued assistance under this section if the Secretary determines that the company, the country of incorporation of the company or a parent company, or the joint venture has failed to satisfy any of the criteria set forth in subsection (d)(9), and that it is in the national interest of the United States to do so.

(f) **Coordination with other Federal technology programs.** When reviewing private sector requests for awards under the Program, and when monitoring the progress of assisted research projects, the Secretary and the Director shall, as appropriate, coordinate with the Secretary of Defense and other senior Federal officials to ensure cooperation and coordination in Federal technology programs and to avoid unnecessary duplication of effort. The Secretary and the Director are authorized to work with the Director of the Office of Science and Technology Policy, the Secretary of Defense, and other appropriate Federal officials to form interagency working groups or special project offices to coordinate Federal technology activities.

(g) **Meetings with industry sources.** In order to analyze the need for the value of joint ventures and other research projects in specific technical fields, to evaluate any proposal made by a joint venture or company requesting the Secretary’s assistance, or to monitor the progress of any joint venture or any company research project which receives Federal funds under the Program, the Secretary, the Under Secretary of Commerce for Technology, and the Director may, notwithstanding any other provision of law,

meet with such industry sources as they consider useful and appropriate.

(h) **Standards development.** Up to 10 percent of the funds appropriated for carrying out this section may be used for standards development and technical activities by the Institute in support of the purposes of this section.

(i) **Acceptance of funds from other Federal departments and agencies.** In addition to such sums as may be authorized and appropriated to the Secretary and Director to operate the Program, the Secretary and Director also may accept funds from other Federal departments and agencies for the purpose of providing Federal funds to support awards under the Program. Any Program award which is supported with funds which originally came from other Federal departments and agencies shall be selected and carried out according to the provisions of this section.

(j) **Definitions.** As used in this section—

(1) the term “joint venture” means any group of activities, including attempting to make, making, or performing a contract, by two or more persons for the purpose of—

(A) theoretical analysis, experimentation, or systematic study of phenomena or observable facts;

(B) the development or testing of basic engineering techniques;

(C) the extension of investigative findings or theory of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, prototypes, equipment, materials, and processes;

(D) the collection, exchange, and analysis of research information;

(E) the production of any product, process, or service; or

(F) any combination of the purposes specified in subparagraphs (A), (B), (C), (D), and (E), and may include the establishment and operation of facilities for the conducting of research, the conducting of such venture on a protected and proprietary basis, and the prosecuting of applications for patents and the granting of licenses for the results of such venture; and

(2) the term “United States-owned company” means a company that has majority ownership or control by individuals who are citizens of the United States.

## ATP RULE—15 C.F.R. PART 295

## Subpart A—General

## Sec. 295.1 Purpose.

(a) The purpose of the Advanced Technology Program (ATP) is to assist United States businesses to carry out research and development on high risk, high pay-off, emerging and enabling technologies. These technologies are:

- (1) High risk, because the technical challenges make success uncertain;
- (2) High pay-off, because when applied, they offer significant benefits to the U.S. economy; and
- (3) Emerging and enabling, because they offer wide breadth of potential application and form an important technical basis for future commercial applications.

(b) The rules in this part prescribe policies and procedures for the award of cooperative agreements under the Advanced Technology Program in order to ensure the fair treatment of all proposals. While the Advanced Technology Program is authorized to enter into grants, cooperative agreements, and contracts to carry out its mission, these rules address only the award of cooperative agreements. The program employs cooperative agreements rather than grants because such agreements allow ATP to exercise appropriate management oversight of projects and also to link ATP-funded projects to ongoing R&D at the National Institute of Standards and Technology wherever such linkage would increase the likelihood of success of the project.

(c) In carrying out the rules in this part, the Program endeavors to put more emphasis on joint ventures and consortia with a broad range of participants, including large companies, and less emphasis on support of individual large companies.

## Sec. 295.2 Definitions.

(a) For the purposes of ATP, the term *award* means Federal financial assistance made under a grant or cooperative agreement.

(b) The term *company* means a for-profit organization, including sole proprietors, partnerships, limited liability companies (LLCs), or corporations.

(c) The term *cooperative agreement* refers to a Federal assistance instrument used whenever the principal purpose of the relationship between the Federal Government and the recipient is the transfer of money, property, or services, or anything of value to the recipient to accomplish a public purpose of support or stimulation authorized by Federal

statute, rather than acquisition by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and substantial involvement is anticipated between the executive agency, acting for the Federal Government, and the recipient during performance of the contemplated activity.

(d) The term *direct costs* means costs that can be identified readily with activities carried out in support of a particular final objective. A cost may not be allocated to an award as a direct cost if any other cost incurred for the same purpose in like circumstances has been assigned to an award as an indirect cost. Because of the diverse characteristics and accounting practices of different organizations, it is not possible to specify the types of costs which may be classified as direct costs in all situations. However, typical direct costs could include salaries of personnel working on the ATP project and associated reasonable fringe benefits such as medical insurance. Direct costs might also include supplies and materials, special equipment required specifically for the ATP project, and travel associated with the ATP project. ATP shall determine the allowability of direct costs in accordance with applicable Federal cost principles.

(e) The term *foreign-owned company* means a company other than a United States-owned company as defined in 295.2(q).

(f) The term *grant* means a Federal assistance instrument used whenever the principal purpose of the relationship between the Federal Government and the recipient is the transfer of money, property, services, or anything of value to the recipient in order to accomplish a public purpose of support or stimulation authorized by Federal statute, rather than acquisition by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and no substantial involvement is anticipated between the executive agency, acting for the Federal Government, and the recipient during performance of the contemplated activity.

(g) The term *independent research organization* (IRO) means a nonprofit research and development corporation or association organized under the laws of any state for the purpose of carrying out research and development on behalf of other organizations.

(h) The term *indirect costs* means those costs incurred for common or joint objectives that cannot be readily identified with activities carried out in support of a particular final objective. A cost may not be allocated to an award as an indirect cost if any other cost incurred for the same purpose in like circumstances has been assigned to an award as a direct cost. Because of diverse characteristics and accounting practices it is not possible to specify the types of costs which may be classified as indirect costs in all

situations. However, typical examples of indirect costs include general administration expenses, such as the salaries and expenses of executive officers, personnel administration, maintenance, library expenses, and accounting. ATP shall determine the allowability of indirect costs in accordance with applicable Federal cost principles.

(i) The term *industry-led joint research and development venture* or *joint venture* means a business arrangement that consists of two or more separately-owned, for-profit companies that perform research and development in the project; control the joint venture's membership, research directions, and funding priorities; and share total project costs with the Federal Government. The joint venture may include additional companies, independent research organizations, universities, and/or governmental laboratories (other than NIST) which may or may not contribute funds (other than Federal funds) to the project and perform research and development. A for-profit company or an independent research organization may serve as an Administrator and perform administrative tasks on behalf of a joint venture, such as handling receipts and disbursements of funds and making antitrust filings. The following activities are not permissible for ATP-funded joint ventures:

(1) Exchanging information among competitors relating to costs, sales, profitability, prices, marketing, or distribution of any product, process, or service that is not reasonably required to conduct the research and development that is the purpose of such venture;

(2) Entering into any agreement or engaging in any other conduct restricting, requiring, or otherwise involving the production or marketing by any person who is a party to such joint venture of any product, process, or service, other than the production or marketing of proprietary information developed through such venture, such as patents and trade secrets; and

(3) Entering into any agreement or engaging in any other conduct:

(i) To restrict or require the sale, licensing, or sharing of inventions or developments not developed through such venture, or

(ii) To restrict or require participation by such party in other research and development activities, that is not reasonably required to prevent misappropriation of proprietary information contributed by any person who is a party to such venture or of the results of such venture.

(j) The term *intellectual property* means an invention patentable under title 35, United States Code, or any patent on such an invention.

(k) The term *large business* for a particular ATP competition means any business, including any parent company plus related subsidiaries, having annual revenues in excess of the amount published by ATP in the relevant

annual notice of availability of funds required by section 295.7(a) of this regulation. In establishing this amount, ATP may consider the dollar value of the total revenues of the 500th company in Fortune magazine's Fortune 500 listing.

(l) The term *matching funds* or *cost sharing* means that portion of project costs not borne by the Federal Government. Sources of revenue to satisfy the required cost share include cash and in-kind contributions. Cash contributions can be from recipient, state, county, city, or other non-federal sources. In-kind contributions can be made by recipients or non-federal third parties (except subcontractors working on an ATP project) and include but are not limited to equipment, research tools, software, and supplies. Except as specified at Sec. 295.25 of this regulation, the value of in-kind contributions shall be determined in accordance with OMB Circular A-110, Subpart C, Section 23. The value of in-kind contributions will be prorated according to the share of total use dedicated to the ATP program. ATP restricts the total value of in-kind contributions that can be used to satisfy the cost share by requiring that such contributions not exceed 30 percent of the non-federal share of the total project costs. ATP shall determine the allowability of matching share costs in accordance with applicable federal cost principles.

(m) The term *person* shall be deemed to include corporations and associations existing under or authorized by the laws of either the United States, the laws of any of the Territories, the laws of any State, or the laws of any foreign country.

(n) The term *Program* means the Advanced Technology Program.

(o) The term *Secretary* means the Secretary of Commerce or the Secretary's designee.

(p) The term *small business* means a business that is independently owned and operated, is organized for profit, and is not dominant in the field of operation in which it is proposing, and meets the other requirements found in 13 C.F.R. Part 121.

(q) The term *United States-owned company* means a for-profit organization, including sole proprietors, partnerships, or corporations, that has a majority ownership or control by individuals who are citizens of the United States.

### **Sec. 295.3 Eligibility of United States- and Foreign-Owned Businesses.**

(a) A company shall be eligible to receive an award from the Program only if:

(1) The Program finds that the company's participation in the Program would be in the economic interest of the United States, as evidenced by investments in the United States in research, development, and manufacturing (including, for example, the manufacture of major components or subassemblies in the United States);

significant contributions to employment in the United States; and agreement with respect to any technology arising from assistance provided by the Program to promote the manufacture within the United States of products resulting from that technology (taking into account the goals of promoting the competitiveness of United States industry), and to procure parts and materials from competitive suppliers; and

(2) Either the company is a United States-owned company, or the Program finds that the company is incorporated in the United States and has a parent company which is incorporated in a country which affords to United States-owned companies opportunities, comparable to those afforded to any other company, to participate in any joint venture similar to those authorized under the Program; affords the United States-owned companies local investment opportunities comparable to those afforded to any other company; and affords adequate and effective protection for the intellectual property rights of United States-owned companies.

(b) The Program may, within 30 days after notice to Congress, suspend a company or joint venture from continued assistance under the Program if the Program determines that the company, the country of incorporation of the company or a parent company, or the joint venture has failed to satisfy any of the criteria contained in paragraph (a) of this section, and that it is in the national interest of the United States to do so.

(c) Companies owned by legal residents (green card holders) may apply to the Program, but before an award can be given, the owner(s) must either become a citizen or ownership must be transferred to a U.S. citizen(s).

#### **Sec. 295.4 The Selection Process.**

(a) The selection process for awards is a multi-step process based on the criteria listed in section 295.6. Source evaluation boards (SEB) are established to ensure that all proposals receive careful consideration. In the first step, called "preliminary screening," proposals may be eliminated by the SEB that do not meet the requirements of this Part or the annual Federal Register Program announcement. Typical but not exclusive of the reasons for eliminating a proposal at this stage are that the proposal is deemed to have serious deficiencies in either the technical or business plan; involves product development rather than high-risk R&D; is not industry-led; is significantly overpriced or underpriced given the scope of the work; does not meet the requirements set out in the notice of availability of funds issued pursuant to section 295.7; or does not meet the cost-sharing requirement. NIST will also examine proposals that have been submitted to a previous competition to determine whether substantive revisions have been made to the earlier proposal, and, if not, may reject the proposal.

(b) In the second step, referred to as the "technical and business review," proposals are evaluated under the criteria found in section 295.6. Proposals judged by the SEB after

considering the technical and business evaluations to have the highest merit based on the selection criteria receive further consideration and are referred to as "semifinalists."

(c) In the third step, referred to as "selection of finalists," the SEB prepares a final ranking of semifinalist proposals by a majority vote, based on the evaluation criteria in section 295.6. During this step, the semifinalist proposers will be invited to an oral review of their proposals with NIST, and in some cases site visits may be required. Subject to the provisions of section 295.6, a list of ranked finalists is submitted to the Selecting Official.

(d) In the final step, referred to as "selection of recipients," the Selecting Official selects funding recipients from among the finalists, based upon the SEB rank order of the proposals on the basis of all selection criteria (section 295.6); assuring an appropriate distribution of funds among technologies and their applications; the availability of funds; and adherence to the Program selection criteria. The Program reserves the right to deny awards in any case where information is uncovered which raises a reasonable doubt as to the responsibility of the proposer. The decision of the Selecting Official is final.

(e) NIST reserves the right to negotiate the cost and scope of the proposed work with the proposers that have been selected to receive awards. For example, NIST may request that the proposer delete from the scope of work a particular task that is deemed by NIST to be product development or otherwise inappropriate for ATP support.

#### **Sec. 295.5 Use of Pre-Proposals in the Selection Process.**

To reduce proposal preparation costs incurred by proposers and to make the selection process more efficient, NIST may use mandatory or optional preliminary qualification processes based on preproposals. In such cases, announcements requesting pre-proposals will be published as indicated in section 295.7, and will seek abbreviated proposals (pre-proposals) that address both of the selection criteria, but in considerably less detail than full proposals. The Program will review the pre-proposals in accordance with the selection criteria and provide written feedback to the proposers to determine whether the proposed projects appear sufficiently promising to warrant further development into full proposals. Proposals are neither "accepted" nor "rejected" at the pre-proposal stage. When the full proposals are received in response to the notice of availability of funds described in section 295.7, the review and selection process will occur as described in section 295.4.

#### **Sec. 295.6 Criteria for Selection.**

The evaluation criteria to be used in selecting any proposal for funding under this program, and their respective weights, are listed in this section. No proposal will be funded unless the Program determines that it has scientific and technological merit and that the proposed technology has strong potential for broad-based economic benefits to the nation. Additionally, no proposal will be funded that

does not require Federal support, that is product development rather than high-risk R&D, that does not display an appropriate level of commitment from the proposer, or does not have an adequate technical and commercialization plan.

(a) Scientific and Technological Merit (50%)

The proposed technology must be highly innovative. The research must be challenging, with high technical risk. It must be aimed at overcoming an important problem(s) or exploiting a promising opportunity. The technical leverage of the technology must be adequately explained. The research must have a strong potential for advancing the state of the art and contributing significantly to the U.S. scientific and technical knowledge base. The technical plan must be clear and concise; clearly identify the core innovation, the technical approach, major technical hurdles, and the attendant risks; and clearly establish feasibility through adequately detailed plans linked to major technical barriers. The plan must address the questions of “what, how, where, when, why, and by whom” in substantial detail. The Program will assess the proposing team’s relevant experience for pursuing the technical plan. The team carrying out the work must demonstrate a high level of scientific/technical expertise to conduct the R&D and have access to the necessary research facilities.

(b) Potential for Broad-Based Economic Benefits (50%)

The proposed technology must have a strong potential to generate substantial benefits to the nation that extend significantly beyond the direct returns to the proposing organization(s). The proposal must explain why ATP support is needed and what difference ATP funding is expected to make in terms of what will be accomplished with the ATP funding versus without it. The pathways to economic benefit must be described, including the proposer’s plan for getting the technology into commercial use, as well as additional routes that might be taken to achieve broader diffusion of the technology. The proposal should identify the expected returns that the proposer expects to gain, as well as returns that are expected to accrue to others, i.e., spillover effects. The Program will assess the proposer’s relevant experience and level of commitment to the project and project’s organizational structure and management plan, including the extent to which participation by small businesses is encouraged and is a key component in a joint venture proposal, and for large company single proposers, the extent to which subcontractor/subrecipient teaming arrangements are featured and are a key component of the proposal.

**Sec. 295.7 Notice of Availability of Funds.**

The Program shall publish at least annually a Federal Register notice inviting interested parties to submit proposals, and may more frequently publish invitations for proposals in the Commerce Business Daily, based upon the annual notice. Proposals must be submitted in accordance with the guidelines in the ATP Proposal Preparation Kit as

identified in the published notice. Proposals will only be considered for funding when submitted in response to an invitation published in the Federal Register, or a related announcement in the Commerce Business Daily.

**Sec 295.8 Intellectual Property Rights; Publication of Research Results.**

(a)(1) Patent Rights: Title to inventions arising from assistance provided by the Program must vest in a company or companies incorporated in the United States. Joint ventures shall provide to NIST a copy of their written agreement which defines the disposition of ownership rights among the members of the joint venture, and their contractors and subcontractors as appropriate, that complies with the first sentence of this paragraph. The United States will reserve a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any such intellectual property, but shall not, in the exercise of such license, publicly disclose proprietary information related to the license. Title to any such intellectual property shall not be transferred or passed, except to a company incorporated in the United States, until the expiration of the first patent obtained in connection with such intellectual property. Nothing in this paragraph shall be construed to prohibit the licensing to any company of intellectual property rights arising from assistance provided under this section.

(2) Patent Procedures: Each award by the Program shall include provisions assuring the retention of a governmental use license in each disclosed invention, and the government’s retention of march-in rights. In addition, each award by the Program will contain procedures regarding reporting of subject inventions by the funding Recipient to the Program, including the subject inventions of members of the joint venture (if applicable) in which the funding Recipient is a participant, contractors, and subcontractors of the funding Recipient. The funding Recipient shall disclose such subject inventions to the Program within two months after the inventor discloses it in writing to the Recipient’s designated representative responsible for patent matters. The disclosure shall consist of a detailed, written report which provides the Program with the following: the title of the present invention; the names of all inventors; the name and address of the assignee (if any); an acknowledgment that the United States has rights in the subject invention; the filing date of the present invention, or, in the alternative, a statement identifying that the Recipient determined that filing was not feasible; an abstract of the disclosure; a description or summary of the present invention; the background of the present invention or the prior art; a description of the preferred embodiments; and what matter is claimed. Upon issuance of the patent, the funding Recipient or Recipients must notify the Program accordingly, providing it with the Serial Number of the patent as issued, the date of issuance, a copy of the disclosure as issued, and if appropriate, the name, address, and telephone number(s) of an assignee.

(b) Copyrights: Except as otherwise specifically provided for in an Award, funding Recipients under the Program

may establish claim to copyright subsisting in any data first produced in the performance of the award. When claim is made to copyright, the funding Recipient shall affix the applicable copyright notice of 17 U.S.C. § 401 or § 402 and acknowledgment of Government sponsorship to the data when and if the data are delivered to the Government, are published, or are deposited for registration as a published work in the U.S. Copyright Office. The funding recipient shall grant to the Government, and others acting on its behalf, a paid up, nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, perform publicly and display publicly, and for data other than computer software to distribute to the public by or on behalf of the Government.

(c) Publication of Research Results: The decision on whether or not to publish research results will be made by the funding Recipient(s). Unpublished intellectual property owned and developed by any business or joint research and development venture receiving funding or by any member of such a joint venture may not be disclosed by any officer or employee of the Federal Government except in accordance with a written agreement between the owner or developer and the Program. The licenses granted to the Government under section 295.8(b) shall not be considered a waiver of this requirement.

#### **Sec. 295.9 Protection of Confidential Information.**

As required by section 278n(d)(5) of Title 15 of the United States Code, the following information obtained by the Secretary on a confidential basis in connection with the activities of any business or joint research and development venture receiving funding under the program shall be exempt from disclosure under the Freedom of Information Act—

- (1) Information on the business operation of any member of the business or joint venture;
- (2) Trade secrets possessed by any business or any member of the joint venture.

#### **Sec. 295.10 Special Reporting and Auditing Requirements.**

Each award by the Program shall contain procedures regarding technical, business, and financial reporting and auditing requirements to ensure that awards are being used in accordance with the Program's objectives and applicable Federal cost principles. The purpose of the technical reporting is to monitor "best effort" progress toward overall project goals. The purpose of the business reporting system is to monitor project performance against the Program's mission as required by the Government Performance and Results Act (GPRA) mandate for program evaluation. The audit standards to be applied to ATP awards are the Government Auditing Standards (GAS) issued by the Comptroller General of the United States (also known as yellow book standards) and the ATP program-specific audit guidelines. The ATP program-specific audit guidelines include guidance on the number of audits required under an

award. In the interest of efficiency, the recipients are encouraged to retain their own independent CPA firm to perform these audits. The Department of Commerce's Office of Inspector General (OIG) reserves the right to conduct audits as deemed necessary and appropriate.

#### **Sec. 295.11 Technical and Educational Services for ATP Recipients.**

(a) Under the Federal Technology Transfer Act of 1986, the National Institute of Standards and Technology of the Technology Administration has the authority to enter into cooperative research and development agreements with non-Federal parties to provide personnel, services, facilities, equipment, or other resources except funds toward the conduct of specified research or development efforts which are consistent with the missions of the laboratory. In turn, the National Institute of Standards and Technology has the authority to accept funds, personnel, services, facilities, equipment, and other resources from the non-Federal party or parties for the joint research effort. Cooperative research and development agreements do not include procurement contracts or cooperative agreements as those terms are used in sections 6303, 6304, and 6305 of title 31, United States Code.

(b) In no event will the National Institute of Standards and Technology enter into a cooperative research and development agreement with a recipient of awards under the Program which provides for the payment of Program funds from the award recipient to the National Institute of Standards and Technology.

(c) From time to time, ATP may conduct public workshops and undertake other educational activities to foster the collaboration of funding Recipients with other funding resources for purposes of further development and commercialization of ATP-related technologies. In no event will ATP provide recommendations, endorsements, or approvals of any ATP funding Recipients to any outside party.

Subpart B—Assistance to United States Industry-Led Joint Research and Development Ventures

#### **Sec. 295.20 Types of Assistance Available.**

This Subpart describes the types of assistance that may be provided under the authority of 15 U.S.C. § 278n(b)(1). Such assistance includes but is not limited to:

- (a) Partial start-up funding for joint research and development ventures.
- (b) A minority share of the cost of joint research and development ventures for up to 5 years.
- (c) Equipment, facilities, and personnel for joint research and development ventures.

### **Sec. 295.21 Qualifications of Proposers.**

Subject to the limitations set out in section 295.3, assistance under this Subpart is available only to industry-led joint research and development ventures. These joint ventures may include universities, independent research organizations, and governmental entities. Proposals for funding under this Subpart may be submitted on behalf of a joint venture by a for-profit company or an independent research organization that is a member of the joint venture. Proposals should include letters of commitment or excerpts of such letters from all proposed members of the joint venture, verifying the availability of cost-sharing funds, and authorizing the party submitting the proposal to act on behalf of the venture with the Program on all matters pertaining to the proposal. No costs shall be incurred under an ATP project by the joint venture members until such time as a joint venture agreement has been executed by all of the joint venture members and approved by NIST. NIST will withhold approval until it determines that a sufficient number of members have signed the joint venture agreement. Costs will only be allowed after the execution of the joint venture agreement and approval by NIST.

### **Sec. 295.22 Limitations on Assistance.**

(a) An award will be made under this Subpart only if the award will facilitate the formation of a joint venture or the initiation of a new research and development project by an existing joint venture.

(b) The total value of any in-kind contributions used to satisfy the cost-sharing requirement may not exceed 30 percent of the non-federal share of the total project costs.

### **Sec. 295.23 Dissolution of Joint Research and Development Ventures.**

Upon dissolution of any joint research and development venture receiving funds under these procedures or at a time otherwise agreed upon, the Federal Government shall be entitled to a share of the residual assets of the joint venture proportional to the Federal share of the costs of the joint venture as determined by independent audit.

### **Sec. 295.24 Registration.**

Joint ventures selected for funding under the Program must notify the Department of Justice and the Federal Trade Commission under the National Cooperative Research Act of 1984. No funds will be released prior to receipt by the Program of copies of such notification.

### **Sec. 295.25 Special Rule for the Valuation of Transfers Between Separately-Owned Joint Venture Members.**

(a) Applicability. This section applies to transfers of goods, including computer software, and services provided by the transferor related to the maintenance of those goods, when those goods or services are transferred from one joint venture member to other separately owned joint venture members.

(b) Rule. The greater amount of the actual cost of the transferred goods and services as determined in accordance with applicable Federal cost principles, or 75 percent of the best customer price of the transferred goods and services, shall be deemed to be allowable costs; provided, however, that in no event shall the aggregate of these allowable costs exceed 30 percent of the non-Federal share of the total cost of the joint research and development program.

(c) Definition. The term best customer price shall mean the GSA schedule price, or if such price is unavailable, the lowest price at which a sale was made during the last 12 months prior to the transfer of the particular good or service.

Subpart C—Assistance to Single-Proposer U.S. Businesses

### **Sec. 295.30 Types of Assistance Available.**

This Subpart describes the types of assistance that may be provided under the authority of 15 U.S.C. § 278n(b)(2). Such assistance includes but is not limited to entering into cooperative agreements with United States businesses, especially small businesses.

### **Sec. 295.31 Qualification of Proposers.**

Awards under this Subpart will be available to all businesses, subject to the limitations set out in section 295.3 and 295.32.

### **Sec. 295.32 Limitations on Assistance.**

(a) The Program will not directly provide funding under this Subpart to any governmental entity, academic institution, or independent research organization.

(b) For proposals submitted to ATP after December 31, 1997, awards to large businesses made under this Subpart shall not exceed 40 percent of the total project costs of those awards in any year of the award.

(c) Awards under this Subpart may not exceed \$2,000,000, or be for more than 3 years, unless the Secretary provides a written explanation to the authorizing committees of both Houses of Congress and then, only after 30 days during which both Houses of Congress are in session. No funding for indirect costs, profits, or management fees shall be available for awards made under this Subpart.

(d) The total value of any in-kind contributions used to satisfy a cost-sharing requirement may not exceed 30 percent of the non-Federal share of the total project costs.

**U.S. Department of Commerce**

Carlos M. Gutierrez, Secretary

**Technology Administration**

Robert C. Cresanti, Under Secretary for Technology

**National Institute of Standards and Technology**

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