ATTACHMENT C

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 (Pages 1 & 2): Single-Company Advanced Technology Program Proposal Cover Sheet (see Exhibit 6).

b. Form NIST-1262 (Page 3): Estimated Multi-Year Budget—Single Company (see Exhibit 7).

c. Form NIST-1262 (Page 4): Subcontracts (see Exhibit 8).

2. Joint Venture Only

a. Form NIST-1263 (Pages 1 & 2): Joint Venture Advanced Technology Program Proposal Cover Sheet (see Exhibit 9).

b. Form NIST-1263 (Page 3): Estimated Multi-Year Budget—Joint Venture (see Exhibit 10).

c. Form NIST-1263 (Page 4): Other Joint Venture Participants (see Exhibit 11).

d. NIST-1263 (Page 5): Subcontracts (see Exhibit 12).

e. 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] 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), Application for Federal Assistance** (see Exhibit 4). Note that there are multiple versions of the SF-424, therefore, be sure to use the SF-424 (R&R) version. Page 1 of this form serves as the cover for the proposal; no other cover page should be included.

b. **Research and Related Other Project Information** (see Exhibit 5).

c. **Budget Narrative** (see Exhibit 13). 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.

d. **References**. Include a list of bibliographic references supporting technical assertions and data including patent citations, and a list of bibliographic references supporting business assertions and economic data.

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.

f. **Foreign-Owned Company Questionnaire** (see Exhibit 14), if the recipient, including any joint venture participant, is foreign owned.

g. **R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire** (see Exhibit 15), if the recipient, including any joint venture participant, or subcontractor will perform work outside the United States.

h. **Letters of Commitment, Support, and Corroboration**, as required and as appropriate.

i. **Human and/or animal subjects documentation**, if applicable.

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 proposalhas 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^{-5} mL per m^2 per mil per day at 25 0^c, 1 atm, 90% RH	10^{-2} mL per m^2 per mil per day at 25 0^c, 1 atm, 90% RH	10^{-1} mL per m^2 per mil per day at 25 0^c, 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 means 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 preliminary 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.

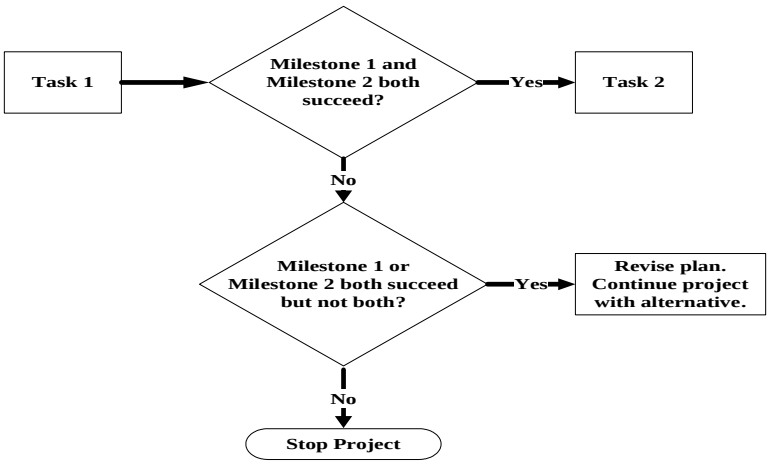
Table 4: Key Milestone (Example)

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	2nd 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	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

system						

(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	----	M 1											Subcontractor A	High	M1: Measure X must be greater than Y
1.2 Subtask		---	M 2										Jones	Medium	M2: Material property P must be at least Z
1.3 Subtask		---	----	M 3									Ahmed	High	M3: Test specific feature using described test plan Decision: If the test fails then use designated alternative
1.4 Subtask			----	----	M 4								Wang	High	M4: Performance metric must exceed threshold Decision: If performance metric is not achieved, then terminate project
2.0 Task				----	----	----	----						Wilson	Low	
2.1 Subtask				----	M 5								Todd	Low	M5: Component must be assembled

2.2 Subtask				-- --	M 6							Jones	Low	M6: Component must be assembled
2.3 Subtask						-- --	M 7					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 15, 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 15 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

Financial Information			
	Current Year to Date	**Last Year**	**Two Years Ago**
Income			
Contract R&D			
Product Sales			
Other			
Total income			
Expenditures			
Cost of goods sold			
R&D			
General and administrative			
Total income			
Gross income before taxes			
Net income after taxes			

Balance Sheet			
	Current Year to Date	**Last Year**	**Two Years Ago**
Assets			
Current assets			
Fixed assets			
Total assets			
Liabilities			
Current liabilities			
Long-term liabilities			
Stockholders equity			
Total liabilities			
Employment Information			

	Number of Employees		
	Current Year to Date	**Last Year**	**Two Years Ago**
Full time			
Part time			
Full time R&D			
Part time R&D			

Ownership Structure (for private companies)			
	Current Percentage	**For private companies less than 3 years old**	**Current Capitalization**
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
1. Letters of Commitment		
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
2. Letters of Support		
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
3. Letters of Corroboration		
Letters of corroboration, documenting efforts to secure other funding	Required - Letters or descriptions documenting contact with funding sources and the outcome	

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 NIST-1262 or 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. SF-424 (R&R), Application for Federal Assistance
- ☐ b. Research and Related Other Project Information
- ☐ c. Form NIST-1262 (all four pages) or Form NIST-1263 (all five pages).

☐ 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 14).

☐ k. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire, if applicable (see Exhibit 15).

- ☐ 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 13).

- ☐ p. Human and/or animal subjects documentation, if applicable. A Human Subjects Determination Checklist is included in this Kit (see Exhibit 2) 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

Proposal Type	Page Limit
Single Company	**40 pages** *(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.)*
Joint Venture	**60 pages** *(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 website and click on "Apply for Grants" under "For Applicants" 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. 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.** Once you are registered:

   a. Step 1 on the "Apply for Grants" page instructs you to "Download a Grant Application Package and Instructions" using the link.
   b. Enter the CFDA number as 11.612 for ATP.
   c. Click on "Download Package." Remember, you'll 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 website under "Quick Links" by clicking on "Grant Search" then under the heading "Search by CFDA Number" type 11.612.

4. **Software Requirements.** In order to access, complete, and submit proposals, proposers need to download and install the FREE Adobe™ Reader. Download and installation instructions are on the Adobe™ website http://www.adobe.com/products/acrobat/readstep.html. For minimum system requirements and additional download instructions, please see the Grants.gov User Guide.

5. **Proposal Components.** Complete proposals must include the following forms and documents:

   a. SF-424 (R&R) , Application for Federal Assistance (http://www.grants.gov/techlib/RRSF424.pdf) [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 (http://www.grants.gov/techlib/RROtherProject.pdf)
   c. NIST-1262, Single Company Advanced Technology Program (ATP) Proposal Cover Sheet **or** NIST-1263 Joint Venture Advanced Technology Program (ATP) Proposal Cover Sheet. NOTE: The NIST-1262 or the NIST-1263 is the Attachment to item 6 on the R&R Other Project Information Form.
   d. Project Narrative, including Executive Summary and Required Letters, as well as bibliographical

references and table of abbreviations, responsive to the detailed guidelines in Chapter 3 of the ATP Proposal Preparation Kit. NOTE: The Project Narrative is the Attachment to item 7 on the Research and Related Other Project Information Form.

e. Budget Narrative
f. Foreign-Owned Company Questionnaire, if applicable
g. R&D Work Performed Outside the United States by the Recipient or Subcontractor Questionnaire, if applicable.
h. Appendix 3, Request for Exemption from 15 C.F.R. Part 27 for Research Involving Human Subjects in Information Technology, Manufacturing, or Imaging Studies, if applicable.
i. Appendix 4, Request for an Exemption From 15 C.F.R. Part 27 for Research Involving Human Subjects in Biological Studies, 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 3, Downloading a Grant Application Package and Instructions from www.grants.gov. The remaining forms are available on the ATP website (http://www.atp.nist.gov/atp/helpful.htm) and should be included as attachments to the Research and Related Other Project Information form. If a specific attachment locations not specified, attach it to the "Other Attachments" section of the form.

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.

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 or Sue Li at 301-975-8817 or at 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).

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.]

Proposal Number:
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.]