AMENDED ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY FOR THE ADVANCED MANUFACTURING TECHNOLOGY CONSORTIA (AMTECH) PROGRAM AMENDMENT 1

The National Institute of Standards and Technology (NIST) is amending its July 24, 2013 Announcement of Federal Funding Opportunity (FFO) (2013-NIST-AMTECH-01) posted on Grants.gov and on the NIST Web site (http://www.nist.gov/ampo/upload/2013_AMTech_FFO.pdf) that solicits proposals for the Advanced Manufacturing Technology Consortia (AMTech) Program.[1]

NIST is issuing this amendment (Amendment 1) to the FFO to make one (1) change. This change corrects a typographical error to clarify that the page limit of the technical proposal is twenty (20) pages as provided in Section IV.3.b.(9) of the July 24, 2013 announcement, not fifteen (15) pages as originally listed in Section IV.3.a.(6) of the July 24, 2013 announcement.

#	New Page	Section	What does the revision do?	How does the new paragraph now read?
1	7	IV.3.a.(6)	The amendment corrects a typographical error to clarify that the page limit of the technical proposal is twenty (20) pages.	***Technical Proposal.*** *The Technical Proposal is a word-processed document of no more than twenty (20) pages responsive to the program description (see Section I. of this FFO) and the evaluation criteria (see Section V.1. of this FFO).*

No other revisions are being made by this amendment. The full text of the Amended FFO, including the revisions being made now, is set forth below.

[1] All page number references are to the full text of the Amended FFO, including the revisions being made with this amendment.

July 24, 2013, as revised July 31, 2013

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
Advanced Manufacturing Technology Consortia (AMTech) Program

EXECUTIVE SUMMARY

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)

- **Funding Opportunity Title:** Advanced Manufacturing Technology Consortia (AMTech) Program

- **Announcement Type:** Initial.

- **Funding Opportunity Number:** 2013-NIST-AMTECH-01

- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards

  Dates: Optional Pre-applications should be received no later than Friday, September 6, 2013. Full applications must be received no later than 11:59 p.m. Eastern Time, Monday, October 21, 2013. Applications received after the deadline will not be reviewed or considered. The anticipated start date for awards is expected to be within the first quarter of calendar year 2014.

- **Application Submission Address:** See Section IV in the Full Announcement Text of this FFO.

- **Funding Opportunity Description:** NIST is soliciting applications from eligible applicants to establish and strengthen new and existing industry-led consortia that are focused on developing advanced technologies to address major technical problems that inhibit the growth of advanced manufacturing in the U.S., to identify and prioritize research projects supporting long-term industrial research needs and a range of eligible activities including but not limited to creating new or updating existing industry-led, shared-vision technology roadmaps for the development of technologies underpinning next-generation and/or transformational innovations, or undertaking other activities designed to establish and strengthen new and existing industry-led, multi-partner consortia that catalyze technology infrastructure and American excellence in advanced manufacturing.

- **Funding Availability:** Approximately $4 million may be available in FY 2013 to fund new awards. See Section II in the Full Announcement text of this FFO.

- **Funding Instrument:** Grant or cooperative agreement.

- **Who is Eligible:** Eligible applicants are any U.S. organization, excluding commercial organizations and federal entities, located within the United States, such as non-profit organizations, accredited institutions of higher education, and state, tribal, and local governments. An eligible organization may work individually or include proposed subrecipients, contractors or other collaborators in a project application, effectively forming a team or consortium. In a team or consortium, eligible subrecipients are the same types of organizations eligible to be applicants. In addition, commercial organizations may participate in teams or consortia as contractors, or in unfunded roles such as informal collaborators or as third parties that help to accelerate project results or help move them into routine or commercial use. Federal entities may participate in teams or consortia as contractors, informal collaborators, or in other roles allowed by law, consistent with each entity's authorities, policies, and procedures. An applicant may not submit more than one application. The NIST Hollings Manufacturing Extension Partnership, and its National Innovation Marketplace program, may be a

useful resource for connecting applicants with potential subrecipients, contractors or other collaborators.

- **Cost Sharing Requirements:** This program does not require cost sharing.

- **Public Webinars:** NIST plans to hold public webinars to offer information on the Advanced Manufacturing Technology Consortia Program. The webinars will also offer general guidance on preparing proposals and provide an opportunity for the public to ask questions about the program. The webinars will be made available online after each event. Attendance is not required. Information on the public webinars is available at http://www.nist.gov/ampo.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

The statutory authority for the Advanced Manufacturing Technology Consortia (AMTech) Program is 15 U.S.C. § 272(b)(1) and (b)(4).

Manufacturing plays a critical role in the American economy, underpins U.S. innovation, and is essential to national security. The health and performance of the U.S. manufacturing sector has become a topic of national interest and concern. As summed up by the National Science and Technology Council, "A gap exists between R&D activities and the deployment of technological innovations in domestic production of goods," contributing significantly, for example, to the growing trade deficit in high-value-added, advanced technology products[2].

A recent report by the President's Council of Advisors on Science and Technology (PCAST), entitled "Capturing Domestic Competitive Advantage in Advanced Manufacturing,"[3] emphasizes this concern noting that the United States has been steadily losing research and development activities linked to manufacturing—and associated high-skilled jobs—to other nations. The report warns that the continued loss of America's leadership in developing innovative technologies for advanced manufacturing will undermine our capacity to compete in global markets and includes sixteen recommendations including public-private partnership to foster ecosystems in advanced manufacturing technologies. As part of a proposed, comprehensive strategy to revitalize America's leadership role, the PCAST report recommends support for new applied research programs for advanced manufacturing. This includes efforts that support new public-private partnerships that would develop broadly applicable and precompetitive technologies, create and disseminate new design methodologies for manufacturing, and promote the development of shared technology infrastructure to support advances in existing manufacturing industries.

On July 22, 2011, NIST published a Request for Information (RFI) in the Federal Register inviting opinions from the public on how to structure the then proposed new AMTech Program.[4] A total of 55 responses from industry, academia, and private citizens were received.[5] Also in 2011, the NIST Visiting Committee on Advanced Technology (VCAT) in consultation with the NIST Director, created a

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[2] National Science and Technology Council (NSTC), February 2012, "A National Strategic Plan for Advanced Manufacturing", http://www.whitehouse.gov/sites/default/files/microsites/ostp/iam_advancedmanufacturing_strategicplan_2012.pdf

[3] President's Council of Advisors on Science and Technology, July 2012, "Capturing Domestic Competitive Advantage in Advanced Manufacturing", AMP Steering Committee Report, http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_amp_steering_committee_report_final_july_17_2012.pdf

[4] http://www.gpo.gov/fdsys/pkg/FR-2011-07-22/pdf/2011-18580.pdf

[5] http://www.nist.gov/public_affairs/releases/amtech-120711.cfm

Subcommittee on Manufacturing that reviewed the PCAST and NSTC reports, studied the importance of advanced manufacturing, reviewed the responses to the AMTech Program RFI, provided recommendations for Design Principles, and issued a report that endorsed "the AMTech Program as a model public-private partnership for supporting technological innovation and facilitating its deployment to support advanced manufacturing".[6]

Responding to these recommendations, NIST recognizes the immediate need to encourage the research community, government agencies, and industry to begin the process of "… incentivizing the formation of and providing resources to industry-led consortia that will support basic and applied research on long term, pre-competitive and enabling technology development"[5] for the manufacturing industry. One key process by which effective collaborations are established is through the exercise of creating and strengthening new and existing industry-led consortia that are focused on developing advanced technologies to address major technical problems that inhibit the growth of advanced manufacturing.

Regardless of the type of organization that leads a consortium, for purposes of this funding opportunity, an industry-led consortium is a collaborative partnership that includes broad participation by companies of all sizes, universities and government agencies, with the objective of participating in a common activity or pooling of resources for achieving common goals that are determined and led by industry. Through this process collaborators come together to focus on objectives and to form a consensus on industry-led goals, resource needs, and planning objectives representative of a broad range of firms involved across stages of the value chain. In this context, the value chain is the interlinked collection of value-adding activities undertaken commonly by multiple sellers and buyers that convert inputs into outputs, create value, and help to create competitive advantage.

NIST is launching the AMTech Program to establish new and strengthen existing industry-led consortia to identify and prioritize research projects supporting long term industrial research needs. Thus, the AMTech Program provides funding to consortia that are focused on developing advanced technologies to address major technological and related barriers that inhibit the growth of advanced manufacturing in the U.S. and the global competitiveness of U.S. companies. Once fully implemented, it is envisioned that AMTech will provide funding in two broad areas: planning awards and implementation awards. This notice announces a funding opportunity for planning awards only.

This AMTech FFO solicits applications from eligible applicants to establish and strengthen new and existing industry-led consortia that are focused on developing advanced technologies and solutions to:

- Address major technological and related barriers that inhibit the growth of advanced manufacturing in the U.S.;
- Identify and prioritize research projects supporting long-term industrial research needs and a range of activities including but not limited to creating new or updating existing industry-led, shared-vision technology roadmaps for the development of technologies underpinning next-generation and/or transformational innovations; or
- Undertake other activities designed to establish and strengthen new and existing industry-led, multi-partner consortia that catalyze technology infrastructure and American excellence in advanced manufacturing.

For the purpose of this FFO, a technology roadmap is a strategic decision-making process and outcome. One perspective of technology roadmapping is as follows:

> *"Technology roadmapping is a flexible technique that is widely used within industry to support strategic and long-range planning. The approach provides a structured (and often graphical)*

[6] Visiting Committee on Advanced Technology (VCAT) of the National Institute of Standards and Technology, U.S. Department of Commerce, February 2013, "2012 Annual Report", http://www.nist.gov/director/vcat/upload/VCAT-Mfg-Summary-Recommendations.pdf

means for exploring and communicating the relationships between evolving and developing markets, products and technologies over time. It is proposed that the roadmapping technique can help companies survive in turbulent environments by providing a focus for scanning the environment and a means of tracking the performance of individual, including potentially disruptive, technologies. Technology roadmaps are deceptively simple in terms of format, but their development poses significant challenges. In particular the scope is generally broad, covering a number of complex conceptual and human interactions."[7]

NIST envisions that the impact from the NIST AMTech Program will be to strengthen U.S. advanced manufacturing, accelerate technology development and adoption, and improve global competitiveness of U.S. companies. AMTech-supported consortia will enable technology development and create the infrastructure necessary for more efficient transfer of technology. U.S. industries and companies that have experience in technology consortia development and/or roadmapping activities have demonstrated a strengthened capacity and capability to lead, innovate and compete within the global marketplace. Thus, over time the NIST AMTech Program will:

- Increase the number of industry sectors and organizations that participate in technology partnerships across geographic regions and company size;
- Identify critical pre-competitive, enabling manufacturing processes and platform technologies with potential transformational impact, and create pathways to translate these advancements into commercial reality by U.S. manufacturers;
- Unlock capital and spur industry-led research that arises from the partnerships and roadmaps that are created;
- Spur technology diffusion and knowledge dissemination among the partnerships forged from AMTech and across U.S. advanced manufacturing supply chains; and
- Strengthen the capacity of new small and medium companies to become successful enterprises.

This FFO is limited to funding of activities that allow for the establishment of new or the strengthening of existing industry-led consortia and technology planning activities. Future AMTech funding opportunities may provide funding for implementation activities that advance the research agenda.

The contact person for this Program is Frank Gayle, and he may be reached at (301) 975-2830, or via email at frank.gayle@nist.gov.

II. Award Information

1. **Funding Instrument**. The funding instrument that will be used is a grant or a cooperative agreement. For a cooperative agreement, the nature of NIST's "substantial involvement" will generally be collaboration between NIST and the recipient organizations. This includes NIST collaboration with a recipient on the scope of work. Additional forms of substantial involvement that may arise are described in Chapter 5.C. in the Department of Commerce (DoC) Grants and Cooperative Agreements Manual, which is available at http://www.osec.doc.gov/oam/grants_management/policy/documents/FINAL%20Master%20DOC%20Grants%20Manual%202013%20(03.01.13)_b.pdf.

[7] Robert Phaal, Clare J.P. Farrukh, David R. Probert, Technology Roadmapping—A Planning Framework for Evolution and Revolution, Technological Forecasting and Social Change, Elsevier, Volume 71, Issues 1–2, January–February 2004, Pages 5–26.

2. **Funding Availability.** NIST plans that approximately $4 million may be made available in FY 2013 to award multiple projects of up to approximately two (2) years in duration, in the range of approximately $250,000 to $500,000, subject to the availability of funds. Projects of smaller size will also be considered. NIST will determine the number of awards selected and whether projects will be funded in whole or in part taking into account the effective fulfillment of program objectives and in accordance with the review and selection process in Section V of this FFO.

   NIST reserves the right to retain any unfunded meritorious applications submitted under this FY 2013 competition and issue grant awards in FY 2014, subject to the availability of funding, to those meritorious applications in accordance with this FFO.

III. Eligibility Information

1. **Eligible Applicants.** Eligible applicants are any U.S. organization, excluding commercial organizations and federal entities, located within the United States, such as non-profit organizations, accredited institutions of higher education, and state, tribal, and local governments. An eligible organization may work individually or include proposed subrecipients, contractors or other collaborators in a project application, effectively forming a team or consortium. In a team or consortium, eligible subrecipients are the same types of organizations eligible to be applicants. Commercial organizations may participate in teams or consortia as vendors, contractors, or in unfunded roles such as informal collaborators or as third parties that help to accelerate project results or help move them into routine or commercial use. Federal entities may participate in teams or consortia as vendors, contractors, informal collaborators, or in other roles allowed by law, consistent with each entity's authorities, policies, and procedures. An applicant may not submit more than one application. The NIST Hollings Manufacturing Extension Partnership, and its National Innovation Marketplace program, may be a useful resource for connecting applicants with potential subrecipients, contractors or other collaborators.

2. **Cost Sharing or Matching.** This Program does not require cost sharing.

IV. Application/Application and Submission Information

1. **Address to Request Application Package.** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at www.grants.gov. The standard application package may be requested by contacting the NIST personnel listed below:

   Karen Williams, National Institute of Standards and Technology, 100 Bureau Drive, Stop 4700, Gaithersburg MD 20899. Phone (301) 975-2397 or (301) 975-2830, email: karen.williams@nist.gov

2. **Pre-application Form *(optional)***

   A Pre-application form, using the SF-424 (http://www.nist.gov/recovery/upload/SF424.pdf), should be received by NIST no later than Friday, September 6, 2013. This Pre-application form is not required. If an applicant does not submit a Pre-application form, that applicant may still submit a full application package (See Section IV.3 of this FFO). The information provided in the Pre-application form is non-binding. The Pre-application form will be used to inform the Program Officers of potential areas of interest and to assist in preparing for the review and selection process. The Pre-application form will not be used to determine an applicant's responsiveness to this FFO.

   The following fields of the SF-424 Pre-application should be completed:

   # 1. Type of Submission
   # 8. Applicant Information (all sections)
   #12. Funding Opportunity Number
   #15. Descriptive Title of the Applicant's Project
   #21. Signature, Authorized Representative

Pre-application forms should be submitted by email to amtech@nist.gov. If you do not receive an email acknowledgement that NIST received your message, call (301) 975-3408.

3. Content and Format of Full Application/Full Application Submission

a. Required Full Application Forms and Documents

(1) **SF-424, Application for Federal Assistance.** The SF-424 must be signed by an authorized representative of the applicant organization. The FFO number 2013-NIST-AMTECH-01 should be identified in item 12 of the SF-424. The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.

(2) **SF-424A, Budget Information - Non-Construction Programs.** This form should reflect budget information for the project as a whole and for each project year. If the application includes subrecipients, this form should consolidate the budget information of the submitting applicant with the budget information for all subrecipients. The budget should reflect anticipated expenses for each year of the project, considering all potential cost increases, including cost of living adjustments.

If known subrecipients are included in the proposal, an additional SF-424A form for each known subrecipient should be submitted in addition to the SF-424A form for the project as a whole. See Section IV.3.a.(12) of this FFO for details of this requirement.

(3) **SF-424B, Assurances - Non-Construction Programs.**

(4) **CD-511, Certification Regarding Lobbying.**

(5) **SF-LLL, Disclosure of Lobbying Activities.** (if applicable)

(6) **Technical Proposal.** The Technical Proposal is a word-processed document of no more than twenty (20) pages responsive to the program description (*see* Section I. of this FFO) and the evaluation criteria (*see* Section V.1. of this FFO).

The Technical Proposal should contain the following information:

(a) Executive Summary. A concise description of the proposed technology consortium development and/or roadmapping project, consistent with the evaluation criteria (*see* Section V.1 of this FFO). The executive summary should not exceed one (1) single-sided page.

(b) Table of Contents.

(c) Identifying and Addressing Significant Challenges. A description sufficient to permit evaluation of the application in accordance with the Identifying and Addressing Significant Challenges evaluation criterion. (*see* Section V.1.a of this FFO).

Technical challenges in any area of advanced manufacturing will be considered provided they require solutions that include the development of highly innovative, transformational technologies that are broadly deployable to diverse manufacturing applications.

The applicant should present their scope and vision, for the proposed project, including the goal(s), objective(s) and outcomes; the challenges that need to be addressed; the advancements and solutions that are being offered; and the impacts enabled as a result of the activities being proposed.

The consortium development and/or roadmapping project being proposed should identify and address significant challenges in manufacturing that are common to an industry or a sector, for example, critical gaps, technologies, skill sets, infrastructure, or other significant challenges. The project being proposed should demonstrate innovation in what it wishes to accomplish and/or how it will be accomplished, relative to the existing capabilities and efforts of the industry or sector being addressed, and should demonstrate that by successfully addressing the significant challenges identified, there will be a strong potential for having significant impact on U.S. competitiveness.

(d) Consortium and/or Roadmapping Development Plan. A description sufficient to permit evaluation of the application in accordance with the Consortium and/or Roadmapping Development Plan criterion (*see* Section V.1.b of this FFO).

The description should include well-founded plans for the entire life cycle, including project development and execution, breadth of value chain engagement, knowledge and technology diffusion, and pathways to adoption. Participation by the full value chain, including small-and mid-sized firms, is desirable. Proposals should describe:

i. The methods that will be used to select, assess, and organize projects, participants, and outcomes that will make up the proposed consortium development activity and/or technology roadmapping.
ii. How the value chain and potential stakeholders will be involved in developing the proposed consortium development activities and/or technology roadmap, including but not limited to: a) systems integrators, b) end users of the technology, c) actual developers of the technology, and d) researchers who have the knowledge to create new technologies.
iii. The processes by which the value chain and relevant stakeholders will be brought together to assess the technology challenge(s) and form a consensus, including but not limited to: a) forums for gathering technical information (e.g. workshops, meetings, conferences, surveys, etc.), or b) the means by which information will be correlated and consolidated into the final roadmap or other deliverables.

Teaming and partnerships are encouraged. Thus, if an incorporated industry consortium is the applicant, a partnership should be proposed to engage other relevant entities to participate in the proposed activities and work towards consortium development. As additional partners are added to offer key expertise, access to facilities, or specialized goods and services, discuss what each brings to the project and what each will do. If a new industry consortium is envisioned but is not the applicant, partnerships with other relevant entities needed to accomplish the proposed activities and consortium development should be described. In all cases, required Letters of Commitment and/or optional Letters of Interest should be provided (*see* Section IV.2.10 and 11 of this FFO).

Creation of financially viable industry-led technology consortia and sustainable roadmapping activities that will have a significant and enduring impact on the U.S. manufacturing sector is a key goal of AMTech. The proposal should describe the sustainability planning of the proposed consortium development and/or roadmapping activities during and after the award period. The commitment and leveraging of participation by public, private, and academic institutions should be discussed as part of the team's sustainability planning. Thus the sustainability plan should document the approaches to be pursued and address the questions "what, how, where, when, why, and by whom".

Measurable success criteria and how project progress will be monitored and documented for the proposed efforts should be described as part of the project's progress monitoring system. Appropriate interim and final key milestones for each year of the plan should be provided. A timeline, preferably using a tool such as a Gantt chart, should be included to logically illustrate the timing and interrelationships of major tasks and key subtasks, and identify the parties responsible for their completion.

The plan to accelerate the project results and/or move them into routine or commercial use should also be described.

(e) Resource Availability and Qualifications. A description sufficient to permit evaluation of the application in accordance with the Resource Availability and Qualifications criterion (*see* Section V.1.c of this FFO).

The resources and budget for the proposed project and its activities must demonstrate its appropriateness and cost-effectiveness with respect to carrying out the work and objectives of the proposal. Note that the budget and budget narrative should only include the federal funds being requested.

A description of the proposed operational or management structure, delegation of activities, and qualifications of key personnel and participating organizations who will be assigned to work on the proposed project must be provided. This includes:

- Qualifications and experience with regard to the significant challenges identified and being addressed.
- Past experience leading programs or projects similar in nature, purpose, or scope to those described in this FFO;
- Any successful track record in carrying out similar work by members of the proposing team, when available; and
- Experiences working collaboratively with a wide variety of organizations, including accredited institutions of higher education; non-profit organizations; consortia; commercial organizations of all sizes; independent research organizations, standards development organizations and standards development processes; and Federal, state, local, Indian tribal, and territorial government representatives.

(7) Budget Narrative. The Budget Narrative for the project as a whole should provide a detailed breakdown of each of the object class categories as reflected on the SF-424A. In addition to the completed Budget Narrative for the full application, separate completed Budget Narrative(s) for all known subrecipient(s) should be included in the application. See Section IV.3.a.(13) of this FFO for details.

The budget justification should address all of the budget categories (personnel, fringe benefits, equipment, travel, supplies, other direct costs and indirect costs). The written justification should include the necessity and the basis for the cost. Only allowable costs should be included in the budget. Information on cost allowability is available in the Supplemental Information, Section B.1 of the DoC Pre-Award Notice Requirements for Grants and Cooperative Agreements, which are contained in the Federal Register notice of December 17, 2012 (77 FR 74634), and are available at https://www.federalregister.gov/articles/2012/12/17/2012-30228/department-of-commerce-pre-award-Notice-requirements-for-grants-and-cooperative-agreements. Information needed for each category is as follows:

a) **Personnel** - At a minimum, the budget justification for all personnel should include the following: name, job title, commitment of effort on the proposed project (in hours or effort level), salary rate, and total direct charges on the proposed project, description of the role of the individual on the proposed project and the work to be performed.

b) **Fringe Benefits** - Fringe benefits should be identified separately from salaries and wages and based on rates determined by organizational policy. The items included in the fringe benefit rate (health insurance, parking) should not be charged under another cost category.

c) **Equipment** - Equipment is defined as an item of property that has an acquisition cost of $5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. Any items that do not meet the threshold for equipment can be included under the supplies line item. The budget justification should list each piece of equipment, the cost, and a description of how it will be used and why it is necessary to the successful completion of the proposed project. Please note that any general use equipment (computers, etc.) that is charged directly to the award, should be allocated to the award according to expected usage on the project.

d) **Travel** - For travel costs associated with travel required by the recipient to complete the project, the budget justification for travel should include the following: destination; names/number of people traveling; dates and/or duration; mode of transportation, lodging and subsistence rates; and description of how the travel is directly related to the proposed project. For travel that is yet to be determined, please provide best estimates based on prior experience. If a destination is not known, an approximate amount may be used with the assumptions given for the location of travel.

e) **Supplies** - A list of each supply, and the breakdown of the total costs by quantity or unit of cost. Include the necessity of the cost for the completion of the proposed project.

f) **Contracts/Subawards** - Each contract or subaward should be treated as a separate item. Describe the services provided and the necessity of the subaward or contract to the successful performance of the proposed project.

g) **Other Direct Costs** - For costs that do not easily fit into the other cost categories, please list the cost and the breakdown of the total costs by quantity or unit of cost. Include the necessity of the cost for the completion of the proposed project. Only allowable costs can be charged to the award.

If a recipient has never received Federal funding from any Federal agency, a certification may be required from a CPA to determine whether the applicant has a functioning financial management system that meets the provisions of 15 C.F.R. § 14.21. Therefore, costs for such an inquiry and certification should be included in the budget accordingly.

(8) **Indirect Cost Rate Agreement.** If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal audit agency. If the rate was not established by a cognizant Federal audit agency, provide a statement to this effect. If the successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate.

(9) **Resumes of Key Personnel** (these do not contribute to the total number of pages). Provide a one (1) page resume for each key person identified in the application. Information on any pages beyond the first page of each resume will not be considered.

(10) **Required Letters of Commitment** (these do not contribute to the total number of pages). Letters that commit specific resources to the project in the event that the application is funded are required from all of the following that apply:

a) If the applicant's application includes subawards or contracts to known third parties, in some cases effectively forming a team, as described in Section III.I, a Letter of Commitment from an authorized organization representative of each known proposed subrecipient and contractor should be included. Each letter should indicate the submitting organization's willingness to participate as a contractor or subrecipient and describe what work they will do and the associated cost to the applicant (*see* Section I of this FFO).

b) If key personnel are identified by the applicant who is willing to fill vacancies on the applicant's or subrecipient's staff, a Letter of Commitment from each identified person should be included. The letter from each such individual, or group of individuals, should indicate the relationship of the writer to the applicant and how the writer will help fulfill the efforts described in the Funding Opportunity Description (*see* Section I of this FFO).

c) If other collaborators will participate as team members, a Letter of Commitment from each such collaborator outlining the nature and importance of the collaboration should be provided. Each letter should indicate the submitting organization's willingness to participate and describe what work they will do and the associated importance of the effort to the project (*see* Section I of this FFO).

Letters of Commitment should not be letters submitted by non-proposing entities wishing to vouch for the applicant's (or entities associated with the applicant) knowledge, skills, and abilities or entities to conduct the proposed work. These should be in the form of a Letter of Interest (*see* Section IV.3.a.11 of this FFO).

(11) **Letters of Interest** (these do not contribute to the total number of pages). Optional letters that indicate willingness from any third party to help accelerate establishment of a new or strengthening of an existing industry-led technology consortia and/or consortia project results. This may include letters from potential organizations involved across stages of the value chain or strategic partners who can aid in any element of the plan to realize impact. Letters of Interest may also be from non-proposing entities wishing to vouch for the applicant's knowledge, skills, and abilities or entities to conduct the proposed work.

(12) **SF-424A, Budget Information - Non-Construction Programs for known subrecipients**, if applicable. If known subrecipients are part of the proposal, an additional SF-424A form for each known subrecipient should be submitted in addition to the SF-424A form listed in Section IV.3.a.(2) of this FFO. A fillable SF-424A form can be found at http://www.nist.gov/director/ocfo/grants/upload/sf424a.pdf. Applicants with known subrecipients should download the fillable SF-424A form, and submit one form for each known subrecipient. List the name of the subrecipient for whom the SF-424A is being submitted in Section A, field 1, column (a) of its own SF-424A.

(13) **Budget Narrative(s) for Known Subrecipient(s).** If known subrecipients are part of the proposal, an additional Budget Narrative for each known subrecipient should be submitted in addition to the Budget Narrative for the application as a whole. Each subrecipient Budget Narrative should follow the pattern set out in Section IV.3.a.(7) of this FFO.

When submitting the application electronically via Grants.gov, items IV.3.a.(1) through IV.3.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. Items IV.3.a.(6) through IV.3.a.(13) must be completed and attached by clicking on "Add Attachments" found in item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov. Applicants should carefully follow specific Grants.gov instructions at www.grants.gov to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received.

b. Full Application Format

(1) **E-mail submissions.** Will not be accepted for full applications. E-mail submission will only be accepted for Pre-applications (*see* Section IV.2 of this FFO).

(2) **Facsimile submissions (fax).** Will not be accepted.

(3) **Paper submissions.** Will not be accepted.

(4) **Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation. Each should be labeled and presented sequentially as they are referred to within the Technical Proposal.

(5) **Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.

(6) **Line spacing.** Single.

(7) **Margins.** One (1) inch top, bottom, left, and right.

(8) **Page layout.** Portrait orientation only except for figures, graphs, images, and pictures (*see* Section IV.2.b.(4) of this FFO).

(9) **Page Limit.** Twenty (20) pages.

Page limit includes: Technical Proposal with all required sections including Figures (including a time line such as a Gantt chart), Graphs, Images, and Pictures.

Page limit excludes: Page limit excludes: Cover page, SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Budget Narrative; Indirect Cost Rate Agreement; One-page Resumes of Key Personnel; Letters of Commitment; Letters of Interest; Copies of Subrecipient SF-424A forms; Human Subjects and/or Vertebrate Animal Research Documentation (if applicable); Bibliographic List of References; Table of Abbreviations.

(10) **Page numbering.** Number all pages sequentially.

(11) **Paper size.** 21.6 by 27.9 centimeters (8 ½ by 11 inches).

(12) **Application language.** English.

(13) **Typed document.** All applications, including forms, must be typed; handwritten applications and forms will not be accepted.

4. **Submission Dates and Times.** Optional Pre-applications should be received no later than Friday, September 6, 2013. Full applications must be received no later than 11:59 p.m. Eastern Time, Monday, October 21, 2013. Applications received after the deadline will not be reviewed or considered. The anticipated start date for awards is expected to be within the first quarter of calendar year 2014.

   NIST strongly recommends that applicants do not wait until the last minute to submit an application. NIST will not make allowance for any late submissions. To avoid any potential processing backlogs due to last minute Grants.gov registrations, applicants are highly encouraged to begin their Grants.gov registration process early.

   In the event of a natural disaster that interferes with timely application submissions, NIST may issue an amendment to this FFO to change the application due date.

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5. **Intergovernmental Review.** Applications under all Programs in this FFO are not subject to Executive Order 12372.

6. **Funding Restrictions.** Applications on product development and commercialization are not considered responsive to this FFO. Profit or fee is not an allowable cost.

7. **Other Submission Requirements**

a. **Pre-application.** Optional Pre-applications (see Section IV.2 of this FFO) should be submitted by email to amtech@nist.gov by the eligible applicant's organization no later than Friday, September 6, 2013.

b. **Full applications must be submitted electronically.** Full applications must be submitted via Grants.gov at www.grants.gov, under announcement 2013-NIST-AMTECH-01.

   (1) Submitters of full applications should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2013-NIST-AMTECH-01 announcement, contact Christopher Hunton by phone at (301) 975-5718 or by e-mail at christopher.hunton@nist.gov.

   (2) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number (Section VI.2.b) and must maintain a current registration in the Federal government's primary registrant database, the System for Award Management (https://www.sam.gov/), as explained on the Grants.gov Web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only authorized individual(s) will be able to submit the application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U. S. territory, please call 800-518-4726. If calling from a place other than the United States or a U. S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact support@grants.gov.

(3) Information essential to successful submission of applications on the Grants.gov system is detailed in the For Applicants section found in red on the left side of the www.grants.gov home page, and all potential applicants should pay close attention to the information contained therein. The All About Grants, Applicant FAQs, and Submit Application FAQs sections found under the Applicant Resources option are particularly important.

All applicants should be aware that adequate time must be factored into applicants' schedules for delivery of their application. Submitters of electronic applications are advised that volume on Grants.gov may be extremely heavy on the deadline date. NIST is not responsible if Grants.gov is unable to accept applications electronically in a timely fashion.

Refer to important information in Section IV.3. Submission Dates and Times, to help ensure your application is received on time.

c. Amendments. Any amendments to this FFO will be announced through Grants.gov. Applicants may sign up on Grants.gov to receive amendments by email, or may request copies from Karen Williams by telephone at (301) 975-2397 or (301) 975-2830, or by email to karen.williams@nist.gov to request copies.

V. Application/Application Review Information

1. Evaluation Criteria. The evaluation criteria that will be used to evaluate applications are as follows:

a. Identifying and Addressing Significant Challenges (0 – 30 points). The quality and technical merit of the proposed consortium development and/or roadmapping project in relation to the significant challenges, vision, scope, goals, objectives and outcomes will be evaluated by assessing the clarity, rationality, innovation, and feasibility of the proposed project.

The importance and significance of the challenges to be addressed by the proposed consortium development activity and/or technology roadmapping activity(ies) will be assessed within the context of national needs, existing industry capabilities and efforts, and the potential for substantive national impacts.

The degree to which the proposed activity(ies) has a strong potential to enhance U.S. manufacturing competitiveness in advanced manufacturing, significantly advance pre-competitive, enabling manufacturing processes and platform technology research and the state of the art, and contribute to the U.S. knowledge base, as related to the objectives of this FFO will be evaluated. Thus a competitive application will need to successfully demonstrate:

(1) Why addressing the challenges identified is expected to revitalize the U.S. leadership role in manufacturing and thereby yield high payoffs for the nation in terms of increased employment and output; and
(2) How addressing the challenges identified will lead to the development of solutions that can provide a sustainable globally competitive advantage for U.S. manufacturers.

The magnitude of the expected payoffs from the proposed solutions and the likelihood of achieving a sustainable competitive advantage for U.S. manufacturers, as described in the proposal, will be evaluated.

b. Consortium and/or Roadmapping Development Plan (0 – 50 points). The quality of the plan to perform the proposed work will be evaluated and should address the questions "what, how, where, when, why, and by whom" in substantial detail. The breadth and comprehensiveness of the stakeholder entities associated with the challenge area that are identified and included in the consortium's efforts, particularly the participation of small and medium sized manufacturers, where appropriate, or the consideration of their specific needs will be evaluated.

The approach to be used to develop/update the proposed consortium development activities and/or proposed roadmapping and how potential stakeholders will be involved will be evaluated. The quality of the consortium and/or roadmapping development plan will be evaluated based on:

(1) The thoroughness of the approach and the process used to assess the merit of proposed solutions,
(2) The degree to which the value chain and relevant stakeholders of all sizes are involved in assessing and selecting technical projects and developing work flow, and
(3) The proficiency of the approach to be used to form consensus among relevant stakeholders.

The quality and appropriateness of the project's progress monitoring systems and the project's measurable success criteria and the means by which progress will be monitored and documented will be evaluated. This includes appropriate interim and final key milestones for each year of the plan. The quality of the timeline provided, such as a Gantt chart, will be evaluated and verified that it logically illustrates the timing and interrelationships of major tasks and key subtasks, and identifies the responsible parties for their completion.

The sustainability planning of the proposed consortium development and/or roadmapping activities during and after the award period, including the nature and importance of collaborations with all team members and the plan to accelerate the project results and/or move them into routine or commercial use, will be evaluated.

c. Resource Availability and Qualifications (0 – 20 points). An assessment of the resources and budget against the proposed project scope and activities will be conducted to determine the appropriateness and cost-effectiveness of the proposed resources and budget with respect to carrying out the work and meeting the objectives of the application relative to that described in Section I of this FFO. Note that the budget and budget narrative should only include the federal funds being requested.

The qualifications of each team member – both organizations and individuals - and the team as a whole will be evaluated.

The proposed operational or management structure, delegation of activities, and qualifications of key personnel and participating organizations who will be assigned to work on the proposed project will be evaluated based upon the quality of the plan provided and the quality of the qualifications, experience and track record of accomplishment in programs, projects and activities related to the purpose or scope of this FFO.

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2. Review and Selection Process

a. Initial Screening of all Program Applications. All applications received in response to this FFO will be assigned to the NIST Advanced Manufacturing Program Office and reviewed to determine whether or not they are eligible, complete, and responsive to this FFO (*see* Section I of this FFO). Applications determined to be ineligible, incomplete, and/or non-responsive based on this FFO may be eliminated from further review.

b. Review of Eligible, Complete, and Responsive Applications. Applications that are determined to be eligible, complete, and responsive will proceed for full review in accordance with the review and selection processes below.

Each application will be reviewed by at least three (3) independent, objective reviewers, knowledgeable in the subject matter of this FFO and its objectives and who are able to conduct a review based on the evaluation criteria (*see* Section V.1. of this FFO). If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an

individual basis, not as a consensus. All applications will be provided to an Evaluation Panel (see below) with their respective reviews for further consideration.

An Evaluation Panel will be established. The Evaluation Panel will consist of NIST staff and/or other federal agency employees with appropriate technical expertise. The Evaluation Panel may ask questions of some or all applicants in writing and/or may require teleconferences with some or all applicants. Using the additional information obtained by the Evaluation Panel, the Evaluation Panel will prepare and provide a final adjectival ranking of the applications to the Selecting Official, the Director of the NIST Advanced Manufacturing Program Office, or designee, for further consideration taking into consideration the following:

(1) the results of the reviewers' evaluations;
(2) the extent to which the proposed scope of the research is complementary to the research programs and research goals of NIST's advanced manufacturing programs as described at http://www.nist.gov/manufacturing-portal.cfm;
(3) the portfolio of proposed projects, such as industry, technology, and state of development of consortium; and
(4) the relevance of an application to the program as described in Section I of this FFO.

For decision-making purposes, applications receiving the same adjectival rating will be considered to have an equivalent ranking, although their technical review scores, while comparable, will not necessarily be the same. The adjectival rankings are:

Fundable, Outstanding
Fundable, Very Good
Fundable
Unfundable

The Selecting Official will make final application selections and recommend funding to the NIST Grants Officer. The Selecting Official shall select the most meritorious application(s) for award based upon the adjectival ranking of the applications, and may select an application based on one or more of the following selection factors: the results of the reviewers' evaluations; the Evaluation Panel evaluation; the availability of funds; the extent to which the proposed scope of the research is complementary to the research programs and research goals of NIST's advanced manufacturing programs as described at http://www.nist.gov/manufacturing-portal.cfm; the portfolio of projects, such as industry, technology, and stage of development of consortium; the relevance to the objectives described in Section I. of this FFO; and whether the project duplicates other projects funded by the Department of Commerce or other Federal agencies.

NIST reserves the right to negotiate the budget costs with the applicants that have been selected to receive awards, which may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject an application where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select part, some, all, or none of the applications. The final approval of selected applications and issuance of awards will be by the NIST Grants Officer. The award decisions of the Grants Officer are final.

3. Anticipated Announcement and Award Dates. The anticipated start date for awards made under this FFO is expected to be in the first quarter of calendar year 2014.

4. Additional Information

a. Application Replacement Pages. Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline.

b. Notice to Unsuccessful Applicants. Unsuccessful applicants will be notified in writing.

c. Retention of Unsuccessful Applications. One (1) of each non-selected application will be retained for three (3) years for record keeping purposes and the other two (2) copies will be destroyed. After three (3) years the remaining copy will be destroyed.

VI. Award Administration Information

1. Award Notices. Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01_002513.pdf and the DoC Financial Assistance Standard Terms and Conditions (January 2013) are available at http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf.

NIST will be conducting a real time, independent evaluation of the AMTech Program while funded projects are underway. Award recipients will be expected to cooperate with NIST and its independent evaluator to assist in the program evaluation.

2. Administrative and National Policy Requirements

a. DoC Pre-Award Notice Requirements. The DoC Pre-Award Notice Requirements for Grants and Cooperative Agreements, 77 FR 74634 (December 17, 2012), are applicable to this FFO and are available at https://www.federalregister.gov/articles/2012/12/17/2012-30228/department-of-commerce-pre-award-Notice-requirements-for-grants-and-cooperative-agreements.

b. Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and System for Award Management (SAM). All applicants for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the Federal government's primary registrant database, SAM. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in SAM (https://www.sam.gov/) and Automated Standard Application for Payment System (ASAP). For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their application is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on the SAM and ASAP. Per 2 C.F.R. Part 25, each applicant must:

(1) Be registered in the Central Contractor Registry (CCR) before submitting an application noting the CCR now resides in SAM;
(2) Maintain an active CCR registration, noting the CCR now resides in SAM, with current information at all times during which it has an active Federal award or an application under consideration by an agency; and
(3) Provide its DUNS number in each application or application it submits to the agency.

The applicant can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one business day. The CCR or SAM registration process may take five or more business days to complete. If you are currently registered with the CCR, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your CCR registration annually. This may take three or more business days to complete. Information about SAM is available at SAM.gov. See also 2 C.F.R. Part 25 and the Federal Register notice published on September 14, 2010, at 75 FR 55671.

c. Collaborations with Federal Entities or National Laboratories.

Collaborations with NIST, another Federal entity, or a National Laboratory are not required and do not make an application more or less favorable in the competitive process unless specified in a Program Description or Selection Process. An applicant may propose such collaboration(s).

If an applicant proposes collaboration with a Federal entity or National Laboratory, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the organization(s) and employee(s) involved, if known. A Letter of Commitment or Interest, as appropriate, should be included as part of the application.

Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the application prior to the merit review.

d. Use of NIST Intellectual Property. If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 15 C.F.R. § 14.36, and in Section B.21 of the DoC Pre-Award Notice Requirements, 77 FR 74634 (December 17, 2012). Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803.

Any use of NIST-owned intellectual property by an applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

e. Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing. Any application that includes research involving human subjects, human tissue/cells, data or recordings involving human subjects, including software testing, must meet the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. In addition, any such application that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant's research involves human subjects. If NIST determines that your research project involves human subjects, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

NIST will accept applications that include exempt and non-exempt human subjects research activities. Non-exempt human subjects research activities will be required to have protocols approved by an Institutional Review Board (IRB) currently registered with the Office for Human

Research Protections (OHRP) within the DHHS and that will be performed by entities possessing a currently valid Federal-wide Assurance (FWA) on file from OHRP that is appropriately linked to the cognizant IRB for the protocol. Information regarding how to apply for an FWA and register and IRB with OHRP can be found at http://www.hhs.gov/ohrp/assurances/index.html. ***The applicant should clearly indicate in the application, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted.***

Generally, NIST does not fund research involving human subjects in foreign countries. NIST will consider, however, the use of **preexisting** tissue, cells, or data from a foreign source on a limited basis if all of the following criteria are satisfied:

(1) the scientific source is considered unique,
(2) an equivalent source is unavailable within the United States,
(3) an alternative approach is not scientifically of equivalent merit, and
(4) the specific use qualifies for an exemption under the Common Rule.

Any award issued by NIST for the program announced in this FFO is required to adhere to all Presidential policies, statutes, guidelines, and regulations regarding the use of human embryonic stem cells. The DoC/NIST follows the NIH Guidelines by supporting and conducting research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines. Detailed information regarding NIH Guidelines for stem cells is located on the NIH Stem Cell Information website: http://stemcells.nih.gov. The DoC/NIST will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. The DoC/NIST will review research using human embryonic stem cell lines that it supports and conducts in accordance with the Common Rule and NIST implementing procedures, as appropriate.

Any request to support or conduct research using human embryonic stem cell lines not currently approved by the NIH, will require that the owner, deriver or licensee of the human embryonic stem cell line apply for and receive approval of the registration of the cell line through the established NIH application procedures: http://hescregapp.od.nih.gov/NIH_Form_2890_Login.htm. Due to the timing uncertainty associated with establishing an embryonic stem cell line in the NIH registry, the use of existing human embryonic stem cell lines in the NIH Embryonic Stem Cell Registry may be preferred by applicants or current award recipients. The NIH Embryonic Stem Cell Registry is located at: http://grants.nih.gov/stem_cells/registry/current.htm.

An applicant or current award recipient proposing to use a registered embryonic stem cell line will be required to document an executed agreement for access to the cell line with the provider of the cell line, and acceptance of any established restrictions for use of the cell line, as may be noted in the NIH Embryonic Stem Cell Registry.

If the applicant's application appears to include research activities involving human subjects the following information may be requested during the application review process:

(1) The name(s) of the institution(s) where the research will be conducted;
(2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
(3) The FWA number of the applicant linked to the cognizant IRB(s);
(4) The FWAs associated with all organizations engaged in the planned research activity linked to the cognizant IRB;
(5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
(6) The IRB approval date (if currently approved for exempt or non-exempt research);
(7) If any FWAs or IRB registrations are being applied for, that should be clearly stated.

Additional documentation may be requested, as warranted, during review of the applicant's application, but may include the following for research activities involving human subjects that are planned in the first year of the award:

(1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
(2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
(3) A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e., biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
(4) A brief description of what portions of the IRB submitted protocol are specifically included in the applicant's application submitted to NIST, if the protocol includes tasks not applicable to the application, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
(5) If a new protocol will only be submitted to an IRB if an award from NIST issued, a draft of the proposed protocol may be requested;
(6) Any additional clarifying documentation that NIST may request during review of applications to perform the NIST administrative review of research involving human subjects.

f. Research Projects Involving Live Vertebrate Animals. Any application that includes participation in research involving live vertebrate animals, that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing, must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals," which can be obtained from National Academy Press, 500 5th Street, N.W., Department 285, Washington, DC 20055. In addition, such applications must meet the requirements of the Animal Welfare Act (7 U.S.C. § 2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using **preexisting** images of animals or to research plans that do not include live animals. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks. ***The applicant should clearly indicate in the application, by separable task, all research activities believed to include research involving live vertebrate animals and the institution(s) where the research activities involving live vertebrate animals may be conducted.***

NIST reserves the right to make an independent determination of whether your research involves live vertebrate animals. If NIST determines that your research project involves live vertebrate animals, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval.

If the applicant's application appears to include research activities involving live vertebrate animals the following information may be requested during the application review process:

(1) The name(s) of the institution(s) where the animal research will be conducted;
(2) The assurance type and number, as applicable, for the cognizant IACUC where the research activity is located. [For example: Animal Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; an USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]
(3) The IACUC approval date (if currently approved);

(4) If the review by the cognizant Institutional Animal Care and Use Committee (IACUC) is pending, the estimated start date for research involving vertebrate animals;
(5) If any assurances or IACUCs need to be obtained or established, that should be clearly stated.

Additional documentation will be requested, as warranted, during review of the application, but may include the following for research activities involving live vertebrate animals that are planned in the first year of the award:

(1) A signed (by the Principal Investigator) copy of the IACUC approved Animal Study Application (ASP);
(2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
(3) If applicable, a nonduplication-of-funding letter if the ASP is funded from several sources.
(4) If a new ASP will only be submitted to an IACUC if an award from NIST issued, a draft of the proposed ASP may be requested.
(5) Any additional clarifying documentation that NIST may request during review of applications to perform the NIST administrative review of research involving live vertebrate animals.

g. Funding Availability and Limitation of Liability. Funding for the programs listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or DoC be responsible for application preparation costs if these programs fail to receive funding or are cancelled because of agency priorities. Publication of this FFO does not oblige NIST or DoC to award any specific project or to obligate any available funds.

h. Collaborations Making Use of Federal Facilities. All applications should include a description of any work proposed to be performed using Federal facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the application prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Web site, http://www.nist.gov/user-facilities.cfm.

i. DoC Representation by Corporations Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under Any Federal Law. In accordance with the Federal appropriations law expected to be in effect at the time of project funding, NIST anticipates that the selected applicant will be provided a form and asked to make a representation regarding any unpaid delinquent tax liability or felony conviction under any Federal law.

3. Reporting

Reporting Requirements. Consistent with the reporting requirements described in Sections A.01 Financial Reports and B.01 Performance (Technical) Reports of the DoC Financial Assistance Standard Terms and Conditions dated January 2013 (http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf), the following reporting requirements shall apply:

(1) Financial Reports. Each award recipient will be required to submit an SF-425, Federal Financial Report in triplicate (an original and two (2) copies), on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period.

(2) Performance (Technical) Reports. Each award recipient will be required to submit a technical progress report in triplicate (an original and two (2) copies), on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. A final technical progress report shall be submitted within 90 days after the expiration date of the award. Two (2) copies of the technical progress report shall be submitted to the Project Manager and the original report to the NIST Grants Officer. Technical progress reports shall contain information as prescribed in 15 C.F.R. § 14.51.

(3) Patent and Property Reports. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.

(4) Third Party Evaluation. NIST intends to retain a third party to interface with NIST and award recipients for ongoing evaluation and best practice identification during the performance of AMTech awards. Award recipients will be required to participate in this third party evaluation. More detail will be provided as part of the award documentation and at kickoff activities.

VII. Agency Contact(s)

Subject Area	Point of Contact
Programmatic and technical questions	Frank Gayle Phone: (301) 975-2830 E-mail: frank.gayle@nist.gov Or Karen Williams Phone: (301) 975-2397 or (301) 975-2830 E-mail: karen.williams@nist.gov
Electronic application submission through Grants.gov	Christopher Hunton Phone: (301) 975-5718 E-mail: christopher.hunton@nist.gov Or Grants.gov Phone: (800) 518-4726 Email: support@grants.gov
Grant rules and regulations	Scott McNichol Phone: (301) 975-5603 Fax: (301) 840-5976 E-mail: scott.mcnichol@nist.gov

VIII. Other Information

Public Webinars: NIST plans to hold public webinars to offer information on the Advanced Manufacturing Technology Consortia Program. The webinars will also offer general guidance on preparing proposals and provide an opportunity for the public to ask questions about the program. The public webinar will be made available online after each event. Attendance is not required. Information on the public webinars is available at http://www.nist.gov/ampo.