

SUPPORTING STATEMENT
U.S. Department of Commerce
National Institute of Standards and Technology
Technology Innovation Program Application Requirements
OMB Control No. 0693-0050

A. JUSTIFICATION

This request is for the information collection requirements associated with applying for funding under the TIP and proposed revisions to several forms (details given in Question 2).

1. Explain the circumstances that make the collection of information necessary.

The Technology Innovation Program (TIP) is a competitive cost sharing financial assistance program designed to assist U.S. businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutions, to support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need. High-risk, high-reward research is research that:

- a. has the potential for yielding transformational results with far-ranging or wide-ranging implications;
- b. addresses areas of critical national need that support, promote, and accelerate innovation in the United States and is within NIST's areas of technical competence; and is too novel or spans too diverse a range of disciplines to fare well in the traditional peer-review process.

The TIP statutory authority is 15 U.S.C. § 278n (**See Attachment A**). The TIP implementing regulations are set forth in 15 C.F.R. Part 296.

To receive TIP funding, two types of entities/proposers, i.e., a single company and a joint venture, must submit proposals in response to NIST/TIP competition notices announcing the availability of funds and request for proposals (RFPs), which are published in the *Federal Register* and Grants.gov Web site. Joint ventures may include companies, institutions of higher education, national laboratories, and nonprofit research organizations. The two types of proposers, i.e., single company and joint ventures, have different funding amounts and performance periods. Single companies may receive up to \$3 million dollars for up to 3 years and joint ventures may receive up to \$9 million dollars for up to 5 years. TIP funds may only be used to pay direct costs. Single company recipients and joint ventures are responsible for funding all of their indirect/overhead costs. In addition, single company and joint venture recipients must cost share at least 50 percent of the yearly total project costs (direct plus all of the indirect costs).

The intent of the collection is to meet TIP statutory requirements, as well as compliance with 15 C.F.R. Part 14.

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with applicable NIST Information Quality Guidelines.

NIST/TIP issues competition notices announcing the availability of funds and RFPs in the *Federal Register* and Grants.gov Web site after funding becomes available in the annual appropriations.

Additionally, TIP issues a *TIP Proposal Preparation Kit* to coincide with the competition announcement. The information collected consists of the:

- a. Proposal project narrative and other proposal submission requirements (**see Attachment B**);
- b. TIP Program Guidelines and Documentation Requirements for Research Involving Human and/or Animal Subjects (**see Attachment C**).
- c. NIST-1022 family of forms (Note: The NIST-1022 family of forms consists of the following):
 - NIST-1022 - TIP Proposal Information Sheet
 - NIST-1022A - Joint Venture Members
 - NIST-1022B - Contractors
 - NIST-1022C - Budget Narrative
 - NIST-1022D - Third Party In-Kind Contributions
 - NIST-1022E - Estimated Multi-Year Budget – Single Company
 - NIST-1022F - Estimated Multi-Year Budget – Joint Venture
 - NIST-1022G - Foreign-Owned Company Questionnaire
 - NIST-1022H - R&D Work Performed Outside the United States By The Recipient or Contractor Questionnaire

The NIST-1022 family of forms (**Attachment D**) is available as a dynamic, interactive set of Adobe PDF forms where answers supplied on the 1022 cover page are used to present the specific forms needed to meet proposal submission needs. Data entered in the family of forms propagates through the entire set of forms to minimize duplicative data entry.);

Changes reflected in this request for information collection from the previous submission are:

- a. Clarification of some sections in the proposal project narrative and other proposal submission requirements for the public’s easier understanding of the award and evaluation criteria.
- b. Minor revisions to the NIST-1022 family of forms to deleted unnecessary information. The affected forms are:
 - NIST-1022B - Deleted “Fax” and “E-mail” sections and inserted in lieu thereof “Contractee”.
 - NIST-1022C - Deleted “Item (Mode of transportation, lodging, and subsistence) column under “Travel” section; deleted “Methodology” under “Equipment,” “Materials/Supplies,” and “Other” sections; and deleted “Nonfederal Cash and Nonfederal Third Party In-Kind Contributions” under “Cost Sharing” section.

The information is first used by reviewers and later by an Evaluation Panel (EP) to evaluate the merits of a project. The EP is comprised of technical experts who determine whether the proposals meet the TIP evaluation and award criteria. Multiple EPs may be established based on the scope of the competition notice announcing the availability of funds and RFP.

NIST must determine that a proposal successfully meets the following award criteria for the proposal to receive funding under the Program:

- a. The proposal explains why TIP support is necessary, including evidence that the research will not be conducted within a reasonable time period in the absence of financial assistance from TIP;

- b. The proposal demonstrates that reasonable and thorough efforts have been made to secure funding from alternative funding sources and no other alternative funding sources are reasonably available to support the proposal;
- c. The proposal explains the novelty of the research (technology) and demonstrates that other entities have not already developed, commercialized, marketed, distributed, or sold similar research results (technologies);
- d. The proposal has scientific and technical merit and may result in intellectual property vesting in a United States entity that can commercialize the technology in a timely manner; and
- e. The proposal establishes that the research has strong potential for advancing the state-of-the-art and contributing significantly to the United States science and technology knowledge base; and
- f. The proposal establishes that the proposed transformational research (technology) has strong potential to address areas of critical national need through transforming the Nation's capacity to deal with major societal challenges that are not currently being addressed, and generate substantial benefits to the Nation that extend significantly beyond the direct return to the proposer.

The information collected is essential for NIST to be able to perform the appropriate review of a proposal to determine if an award should be granted.

This information collection and dissemination will comply with the NIST CIO Information Quality Guidelines and Standards.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

TIP proposals may be submitted electronic via Grants.gov (www.grants.gov).

4. Describe efforts to identify duplication.

The uniqueness of TIP is that it is designed to support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need.

Other agencies are focused on mission specific projects or basic research. Their assistance programs do not lend themselves to the specific needs of TIP. Because TIP proposals are unique and submitted generally once, the proposals submitted by the various businesses do not duplicate each other. Each proposal is unique with regard to the technical issues, resources, and capabilities of the proposer and therefore do not duplicate others.

The NIST-1022 family of forms are designed to capture specific information needed for TIP purposes to meet programmatic and statutory requirements. For example:

- Organization type (small-, medium-, large-sized companies; foreign-owned U.S.-located companies;
- Other joint venture members;
- Does company have a parent company outside the United States;
- Is the company majority-owned by non-U.S. citizens;

- Is the company subject to control by non-U.S. citizens;
- Will any R&D work be performed outside the United States;
- Estimated yearly multi-year budget;
- Sources of funding per year;
- Third party in-kind contributions;
- “Non-proprietary” proposal abstract used to identify appropriate technical reviewers for the proposal.

5. If the collection of information impacts small businesses or other small entities, describe the methods used to minimize burden.

Every effort has been made to streamline the information collection requirement for ease of all proposers, especially small businesses. Consideration was given to the expense involved in preparing proposals. The type of information being collected is essential for NIST to be able to perform the appropriate technical and budget reviews so that the most meritorious proposals are selected for funding. The information collected is readily available to the potential proposer and, thus, does not impose an unnecessary or additional burden. The *TIP Proposal Preparation Kit* provides guidelines for proposal preparation and submission. It has gone through numerous technical, administrative, and legal revisions to provide greater clarification to the public on how to prepare competitive TIP proposals. The *TIP Proposal Preparation Kit* reflects TIP’s efforts to provide clear and concise information to explain the TIP evaluation and award criteria.

TIP believes the burden on potential small business proposers is small in comparison to the benefits that would accrue if their proposals were funded.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

If the collection is not conducted, TIP will not be able to obtain the information required to evaluate the merits of a proposal. A proposal is essential to collect the required technical and budget information for reviewers to determine the worthiness of a proposal. TIP would not be able to accomplish its mission without soliciting proposals, evaluating them, and making funding decisions in accordance with the TIP legislation and implementing regulations.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

If a proposer elects to submit their proposal electronically, there are no special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines. Since TIP accepts proposals submitted electronically, the need for paper submission of multiple copies is eliminated, should the proposer choose this option.

If, however, a proposer elects to submit their proposal in paper form, special circumstances require them to submit more than an original and two copies of any proposal. The original and 15 copies of the proposals are necessary under TIP due to multiple reviews of the proposals containing proprietary/confidential information on business operations and trade secrets possessed by the proposers. Proposals received under a competition receive reviews by technical experts, including the EP. The EP will typically be comprised of 5 to 10 technical experts. The EP may be supplemented with additional technical reviewers who serve as technical consultants to the EP. Grants officials and legal staff also

review proposals, as appropriate. Furthermore, many proposers elect to include color graphics depicting the specifics of their technology. These features do not lend themselves to the limited authorized copying capabilities of TIP. To contract out the reproduction of these proposals increases the risk of exposing proprietary information and introduces a significant time delay in reviewing, evaluating, and funding proposals. Multiple reviews of proposals are essential in TIP meeting its objectives of fair and adequate competition.

8. Provide a copy of the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The 60 Day Federal Register Notice soliciting public comments was published on September 3, 2008. No comments were received.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

Respondents whose proposals are selected for funding receive awards using the grant or cooperative agreement financial assistance-funding instrument. No other payments or gifts are provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

The government will protect confidential/proprietary information on business operations and trade secrets possessed by any company or participant to the full extent of the law. Such information will be withheld from disclosure pursuant to the following statutes:

- a. Trade Secrets Act - 18 U.S.C. § 1905 (http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+18USC1905).
- b. Freedom of Information Act (FOIA) - 5 U.S.C. § 552(b) (http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+5USC552).
- c. Economic Espionage Act – 18 U.S.C. § 1832 (http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+18USC1832).

These assurances are stated in the *TIP Proposal Preparation Kit*. In the collection, review, and handling of information in proposals, TIP presumes that all proposals contain confidential/proprietary information, whether or not so identified by the proposer. All individuals who have access to TIP proposals must sign a TIP Conflict of Interest and Confidentiality Agreement.

If an award is issued, the original proposal is maintained in the NIST official award file. Some copies are shredded and the remaining copies are maintained under strict security at TIP. The TIP security proposal handling procedures require a strict sign out/in automated bar coding tracking system. The sign out/in automated bar coding tracking system of proposal handling is conducted behind secured (cipher lock) doors. All but one copy of unfunded proposals are shredded after each competition.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

Not applicable. The information collected does not include questions of a sensitive nature.

12. Provide an estimate in hours of the burden of the collection of information.

The burden hours for the collection of information are estimated at 11,100 based on approximately 300 proposals at 37 hours per proposal. A breakdown of burden hours for proposal submission is as follows:

Read instructions, plan activities, and gather information	6 hours
Prepare project narrative	14 hours
Prepare NIST-1022C Budget Narrative	3 hours
Professional Review of Proposal	3 hours
Clerical preparations (data input, assembly, text editing, photocopying, etc.)	4 hours
Complete NIST-1022B TIP Contractors, if applicable	½ hour
Complete NIST-1022D Third Party In-Kind Contributions, if applicable	½ hour
Complete NIST-1022G Foreign-Owned Company Questionnaire, if applicable	1 hour
Complete NIST-1022H R&D Work Performed Outside United States by the Recipient or Contractor Questionnaire, if applicable	1 hour
Prepare Joint Venture Agreement, if applicable	2 hour
Prepare human/animal subjects documentation, if applicable	<u>2 hours</u>
	37 hours

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection of information (excluding the value of the burden hours in #12 above).

Proposers who submit their proposals electronically (approximately 50 percent anticipated out of 300 proposals for a total of 150) will not incur any duplicating costs; those that elect to submit by paper (approximately 50 percent out of 300 proposals for a total of 150), however, may incur some duplicating costs if done outside their company. It is expected that out of the 150 proposers that submit by paper, approximately 50 percent or 75 proposers will not incur any duplicating costs as they will be included in the organization’s overhead pool. For the remaining 50 percent or 75 proposers that may use outside duplicating services, it is estimated that the cost would be approximately **\$7,500** (75 proposals x \$100 for duplicating services).

Of the 300 proposals submitted approximately 10 percent or 30 may need to travel to NIST to participate in an oral review. While the expenses will vary greatly depending on the location of proposers, TIP estimates that on average a company may incur about \$1,000 for travel to NIST. This includes the expenses for transportation and subsistence for the one-day trip. The travel expenses will average about **\$30,000** (30 proposals x \$1,000).

In summary, the estimate of the total annual cost burden to the respondents is **\$37,500**.

14. Provide estimates of annualized cost to the Federal government.

An average of approximately 16 professional hours and 1 clerical hour are needed for proposal review. Using loaded wage rates of \$116 per hour for professional time and \$41 per hour for clerical time, each proposal costs the government approximately \$1,897 [(\$116 x 16 = \$1,856) + (\$41 x 1 = \$41)]. For approximately 300 proposals, the review process cost is \$569,100 (\$1,897 x 300). The total professional cost is \$556,800 (\$1,856 x 300) and the total clerical cost is \$12,300 (\$41 x 300) for a total of \$569,100.

For each of the approximate 61 proposals (20 percent of 300) that may participate in an oral review, an additional 5 professional hours may be required for review, yielding a cost of \$580 per proposal (\$116 x 5). For approximately 61 proposals the total professional cost is \$35,380 (\$580 x 61).

If approximately all of the 61 proposals are selected for funding, an additional ½ clerical hour is required for final processing, yielding a cost of \$20.50 per proposal (½ x \$41). For approximately 61 proposals that may be selected for funding, the total clerical cost is \$1,251 (\$20.50 x 61).

In summary, the estimate of annualized cost to the Federal government for the proposal review process is \$605,731 (\$569,100 + \$35,380 + \$1,251). The total professional cost is \$592,180 (\$556,800 + \$35,380) and the clerical cost is \$13,551 (\$12,300 + \$1,251).

Note that not every proposal will receive the same number of reviews as some will drop out during prescreening. The above calculations are based on estimates. Grants administration costs are not included because they are a normal and customary part of the functions of NIST.

15. Explain the reasons for any program changes or adjustments.

A cost burden adjustment increase of \$37,500 is included because it was inadvertently omitted in the previous submission.

16. For collections of information whose results will be published, outline the plans for tabulation and publication.

Not applicable.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

Not applicable.

18. Explain each exception to the certification statement.

Not applicable.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

This collection of information does not employ statistical methods.