

SUPPORTING STATEMENT
U.S. Department of Commerce
Bureau of Industry and Security
National Security and Critical Technology Assessments of the US Industrial Base
Critical Technology Assessment of U.S. 5-Axis Machine Tool Industry
OMB Control No. 0694-0119

A. Justification

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

The Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), is undertaking a critical technology assessment of the U.S. 5-Axis Machine Tool Industry in coordination with the U.S. Department of Defense (DOD), Office of the Under Secretary of Defense (Industrial Policy). This assessment was initiated in part, on the findings of a January 2007 Institute for Defense Analyses study of machine tools and export controls which asserted that overall U.S. machine tool global leadership has been lost (see attached letter). Also participating in this assessment are representatives from the U.S. Department of Energy, Kansas City and Oak Ridge Y-12 Facilities, the National Institute of Standards and Technology and the U.S. Air Force. Industry advisors to the assessment include the Association for Manufacturing Technology and the National Tooling and Machining Association. Both industry organizations are fully supportive of the effort. A number of 5-Axis Machine Tool companies are also assisting in the effort.

OTE has authority under Section 705 of the **Defense Production Act of 1950**, as amended and **Executive Order 12656**, to conduct assessments and collect information from industry in support of the U.S. defense industrial base. (DPA authority was transferred from BIS/Office of Strategic Industries and Economic Security to OTE in the fall of 2006). These assessments are normally undertaken at the request of the Department of Defense, with one or more of the Armed Services participating. They focus on industrial, financial and economic issues affecting specific defense-related industries or technologies. The enclosed survey questionnaire, which covers 2005-2008 with projections for 2009, is the primary source of information needed for a defense industrial base assessment of this type. The information gained from the survey will be used to assess the health and competitiveness of the domestic 5-Axis Machine Tool industry and its ability to support current and future defense program requirements (manufacturers, distributors, and industry and government end-users).

OTE is the focal point for defense industrial base analyses among civilian Federal

agencies by virtue of the above mentioned statute and executive order, which includes mandatory data collection authority to carry out these responsibilities. OTE has conducted approximately 40 assessments of this nature in the past 20 years under various related defense industrial base programs. Assessments generally review in detail those industries experiencing employment, international competition, financial, production, investment and other difficulties in their ability to support defense and national security programs. The survey document is designed to collect information that facilitates this kind of in-depth analysis.

The 5-Axis Machine Tool industry has had difficulty adjusting to declines in overall U.S. manufacturing, increasing international competition, export controls, an aging workforce, and shortages of technically skilled machinists as well as lack of investment and research & development expenditures to develop world class products.

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 all applicable Information Quality Guidelines.

OTE intends to survey approximately 300 firms, covering not more than 50 5-axis machine tool manufacturers/distributors as well as approximately 250 end-users (defense and commercial) of 5-Axis Machine Tools. The survey is a one-time only request. Quantitative data obtained from the survey will be compiled into an aggregate database for analysis and eventual publication. This data is needed to assess trends, growth rates, industry dependence on defense markets, exports, employment, investment, research & development, and net income/profitability. Qualitative questions are used to complement the statistical data. The questions address the key issues of company capabilities, labor skills, exports and export controls, competitive standing, investment strategies, and industry consolidation. Using the aggregated survey data, the overall goal is to enable the private sector and government agencies to monitor trends, benchmark industry performance and raise awareness of diminishing manufacturing and R&D capabilities.

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.

To lessen the burden on respondents, OTE is encouraging the firms to provide electronic responses. Each respondent will receive a personalized letter which outlines the requirements of the study and the scope of information required; the letter will also contain a Login ID and Password with which the respondent can gain access to the secure online survey application. This approach was used successfully in a 2005 Imaging and

Sensors Industry, 2006 U.S. Space Industry and 2007 Defense Mission-Critical Microchip Industry Surveys. All three surveys were reviewed and approved by OMB.

The statistical information requested in the survey tracks closely with the product categories and groups commonly used in the industry. Many firms will have the information computerized and will be able to retrieve it in the form requested on the survey. Other questions will require thought and perhaps discussion among several individuals for proper responses. These questions do not lend themselves to standardized computer automation. However, the questions only require brief responses in the text boxes provided.

4. Describe efforts to identify duplication.

The information sought in the survey is unique and not available from any other source, either public or private. Some of the employment data requested is submitted from firms in a statistical sample to the U.S. Census Bureau. However, there is no way to ascertain from aggregated Census data the employment of companies specifically involved in the 5-Axis-Machine Tool industrial base. The Census Bureau is precluded by law from releasing information on specific companies.

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

This survey will be distributed to a limited number of small businesses in the 5-axis machine tool industry and related end-users. The electronic survey instrument was designed to minimize the burden on all respondents. As many manufacturers/distributors work in a narrow portion of the overall 5-Axis Machine Tool industry, a number of questions in the survey with sub-elements covering multiple products will not apply to those firms and will therefore not require a response. If for any reason the respondent cannot complete the survey online, OTE will work with the respondent on an alternate form of submission. However, because of the high-tech nature of this industry and end-users, we are expecting almost all firms to respond electronically.

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

In the case of this critical technology assessment of the U.S. 5-Axis Machine Tool Industry, the survey is the only method available to OTE to carry out its responsibilities under the Defense Production Act of 1950, as amended, and Executive Order 12656, as well as to cooperate with the Under Secretary of Defense (Industrial Policy). Without the information gathered from the survey, OTE could not fully assess the industry's health and competitiveness, detail overall findings or formulate workable recommendations for the Government and other interested public and private organizations.

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

There are no special circumstances that will result in the collection of information in a manner inconsistent with the guidelines of 5 CFR 1320.6. Survey responses will contain business confidential information, which will be protected by the U.S. Department of Commerce, Bureau of Industry and Security.

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 recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The Federal Register notice is not applicable to this collection because it falls within the scope of the BIS generic authority entitled, “National Security and Critical Technology Assessments of the U.S. Industrial Base”, approved under OMB Control No. 0694-0119. This authority is renewed every three years (renewed in 2006) to support on-going BIS defense industrial base assessment needs.

OTE staff developed the survey in consultation with industry and government experts over a period of several months. The following is a list of those individuals who provided input and advice:

Government/Defense

Alan Taylor - U.S. Air Force Research Laboratory, 937-522-3252

Joe Davenport - DOD Defense Supply Center Richmond, 804-279-6326

Thomas Colandene - Defense Technology Security Administration, 703-325-3518

Michael King - National Nuclear Security Administration, Kansas City Plant, 816-997-5175

George Loh - DOC, Bureau of Industry and Security, 202-482-3570

David Cammarota - DOC, International Trade Administration, 202-482-5157

Alkan Donmez - National Institute of Standards and Technology, 301-975-6618

Trade Associations

Paul Warndorf - The Association for Manufacturing Technology, 703-827-5291

Kevin King - National Tooling and Machining Association, 800248-6862

Companies

David Goodreau - Superior Thread Rolling Company, 818-504-3626

Newman Marsilius - Moore Machine Tool, 203-366-3224

Osva “Chip” Storie, MAG Cincinnati, 859-534-4835

9. Explain any decisions to provide payments or gifts to respondents, other than

remuneration of contractors or grantees.

This survey will not involve any payment or gifts to respondents; however, copies of the completed 5-Axis Machine Tool Industry assessment will be provided to the respondents upon request.

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

The survey and its cover letter provide assurances to the respondents that the information collected through the survey will be deemed *business confidential* and will be treated in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C.A. app. Section 2061 et. seq.). This section prohibits the publication or disclosure of such information unless the President determines that its withholding is contrary to the national defense. The survey will be administered and the data collected via a secure internet server. Information submitted will not be shared with any non-government entity, other than in aggregate form, and the U.S. Department of Commerce will protect the confidentiality of such information pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request. OTE has a long and successful track record in protecting business confidential information collected under the above statute.

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.

This survey will not collect information that could be construed as being of a sensitive nature, such as information concerning sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered sensitive or private.

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

OTE estimates that the total burden placed on the U.S. 5-Axis Machine Tool Industry by this survey effort will be approximately 3,600 hours. This is based on distributing surveys to 300 companies, with an average time of 12 hours needed to complete the survey.

This burden estimate is subject to variations among individual companies because of differences in record keeping, organization size, and other variables. The estimate is based on past experience of OTE, as well as feedback from companies that have completed our surveys. OTE (formerly the Office of Strategic Industries and Economic Security) has conducted surveys of various industries, including imaging and sensors,

biotechnology, cartridge and propellant actuated devices, space, shipbuilding and repair and others.

The estimated total cost to respondents of this information collection is \$100,800. This estimate was calculated by assuming the respondents' average work rate is \$28 per hour multiplied by the total burden hours of 3,600.

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

This item is not applicable because the survey questionnaire will not impose any annual costs on respondents involving capital and start-up costs or affect the cost of operation, maintenance, or purchased services costs.

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

The estimated cost to the Federal government for the survey is \$76,465. A major portion of this cost is related to the survey questionnaire, which includes preparation, collecting and verifying the information, and analyzing the data. Other costs will be incurred in summarizing the analysis and findings, preparing the final report, and report printing and distribution. The direct employee costs were estimated by assuming the hours spent on the project as about one-half year equivalent, or 26 weeks and taking half the annual pay of one GS-14, step 10. The direct employee cost is \$63,721.

Indirect or overhead costs associated with the project are calculated as 20 percent of the direct employee cost, or \$12,744. A review of OTE budgets from previous years indicates costs for building maintenance, telephone, computers, and space rental charges generally run about 20 percent of total employee costs.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

Because the nature of this collection of information falls within BIS's generic authority entitled, "DOC/BIS National Security and Critical Technology Assessments of the U.S. Industrial Base", (OMB Control No. 0694-0119) there is no increase in burden hours. Because this is the first time BIS has used this authority in FY2008 (with an unused balance of 24,000 burden hours authorized annually), an unused balance to the authority of 20,400 annual burden hours (24,000 minus 3,600) will remain if the assessment is approved under this authority.

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

All data collected will be aggregated before publishing to protect company confidentiality. The surveys will be provided electronically to the 300 companies in March 2008. The analysis and report writing will be prepared in draft form by the end of July 2008. The final report is planned for publication in August 2008.

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. BIS will display the expiration date of this information collection authority on all survey and instructional instruments the public receives.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

Not applicable.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.

Attachment: DOD Office of the Under Secretary of Defense (Industrial Policy) Letter of Cooperation