

May 7, 1996

FOR: The Commissioners  
 FROM: James M. Taylor, Executive Director for Operations /s/  
 SUBJECT: FINAL POLICY STATEMENT - CONVERSION TO THE METRIC SYSTEM

- PURPOSE:
- BACKGROUND:
- DISCUSSION:
- COORDINATION:
- RECOMMENDATION:
  - Background
  - Comments Received
  - Statement of Policy

**PURPOSE:**

To seek Commission approval to publish in the Federal Register a final statement of policy on conversion to the metric system.

**BACKGROUND:**

On September 27, 1995 (60 FR 49928), the U. S. Nuclear Regulatory Commission ([NRC](#)) published a request for public comment on its existing metrification policy. This action was taken in accordance with the NRC's policy statement of October 7, 1992 (57 FR 46202), in which the Commission was to assess the state of metric use by the licensed nuclear industry in the United States after 3 years to determine whether the policy should be modified. The purpose of the attached Federal Register notice is to inform the public of the Commission's decision that its Statement of Policy on Conversion to the Metric System does not need to be modified, that it considers this policy final, and that its conversion to the metric system is complete.

**DISCUSSION:**

On August 23, 1988, Congress passed the Omnibus Trade and Competitiveness Act (the Act). (19 USC 2901 et seq.), which amended the Metric Conversion Act of 1975, (15 USC 205a et seq.). Section 5164 of the Act (15 USC 205a) designates the metric system as the preferred system of weights and measures for United States trade and commerce. The Act also requires that all Federal agencies convert to the metric system of measurement in their procurements, grants, and other business-related activities by the end of fiscal year (FY) 1992, "except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms, such as when foreign competitors are producing competing products in non-metric units." (Section 5164(b)(2)).

Executive Order (EO) 12770, "Metric Usage in Federal Government Programs" was signed by the President on July 25, 1991. Its purpose is "to implement the Congressional designation of the metric system of measurement as the preferred system of weights and measures for the United States trade and commerce." Further, the EO directs all executive branch departments and agencies "to take all appropriate measures within their authority to carry out the provisions of this order."

In response to these actions, the NRC published a metrification policy statement for comment in the Federal Register (57 FR 4891) on February 10, 1992. The Commission considered several alternatives at that time.

One alternative considered for compliance with the Act was an abrupt conversion of NRC activities to metric units. However, this action appeared to be neither necessary nor prudent for several reasons. First, licensed nuclear power plants are operated by regulated monopolies or public entities that are not involved in the export business. They, like the bulk of NRC materials licensees, do not participate in world markets. Therefore, the prospect of competitive advantage of employing the metric system of measurement is not directly relevant to these licensees. Second, the NRC has not received any petition for rulemaking from any licensee or applicant requesting NRC to amend its regulations to conduct licensing and regulatory matters in the metric system. Third, an abrupt and universal conversion to metric could possibly deleteriously affect the public health and safety because the introduction of an unfamiliar measurement system could lead to confusion and mistakes. This is particularly true in the case of an emergency when quick decisive action will be needed in a high-stress situation. Existing emergency plans are written in English units. The individuals who would need to act in an emergency, be they licensee personnel or agents of a local Government, are generally conversant only in English units. Fourth, requiring licensees whose market uses the English system to deal with the NRC only in metric units would pose an economic burden on those licensees with no safety or other benefit.

A practical approach to using the metric system is one that is both consistent with the intent and direction of the Act and does not introduce the safety concerns noted above or result in an economic burden to licensees or applicants. This type of approach would result in the use of the metric system by those licensees and license applicants for whom the use of the metric system presents no economic disadvantage and no safety detriment to the public.

The policy statement consistent with this position was then published on October 7, 1992 (57 FR 46202), which also called for the NRC to assess the state of metric use by the licensed nuclear industry in the United States after 3 years to determine whether the policy should be modified. As a result, the staff contacted members of various industrial and standards groups to determine their view of the NRC policy. On September 27, 1995 (60 FR 49928), the NRC published a request for public comment on its existing policy to learn if any modifications to the policy were needed. The comments received from the industrial and standards groups were included in the request. As a result, the NRC received four comments, all from the nuclear power generating industry and all in favor of the NRC's policy.

The staff believes that no changes to the Commission's metrification policy are needed, and that the proposed statement of final policy should be published in the Federal Register. This would complete the NRC's obligation in converting to the metric system of measurement.

**COORDINATION:**

The Office of the General Counsel has no legal objection to this paper. The Office of Congressional Affairs concurs with

the contents of this paper.

## **RECOMMENDATION:**

That the Commission:

1. Approve the Final Statement of Policy for publication ([Attachment 1](#)).

2. Note:

a. A public announcement will be issued ([Attachment 2](#)); and

b. The appropriate Congressional committees will be notified ([Attachment 3](#)).

James M. Taylor  
Executive Director for Operations

CONTACT: Dr. Frank A. Costanzi, RES  
(301) 415-6250

Attachments: As stated (3)

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ATTACHMENT 1

[7590-01-P]

## **NUCLEAR REGULATORY COMMISSION**

### **Conversion to the Metric System**

AGENCY: Nuclear Regulatory Commission.

ACTION: Final policy statement.

SUMMARY: On September 27, 1995, the U. S. Nuclear Regulatory Commission (NRC) published a request for public comment on its existing metrification policy. This action was taken in accordance with the NRC's policy statement of October 7, 1992, in which the Commission was to assess the state of metric use by the licensed nuclear industry in the United States after 3 years to determine whether the policy should be modified. The purpose of this notice is to inform the public of the Commission's decision that its Statement of Policy on Conversion to the Metric System does not need to be modified, that it considers this policy final, and that its conversion to the metric system is complete.

EFFECTIVE DATE: **[Date of publication in the Federal Register.]**

FOR FURTHER INFORMATION CONTACT: Dr. Frank A. Costanzi, Chairman, NRC Metrification Oversight Committee, U. S. Nuclear Regulatory Commission, Washington, DC 20555; telephone: (301) 415-6250; e-mail [FAC@nrc.gov](mailto:FAC@nrc.gov).

SUPPLEMENTARY INFORMATION:

- [Background](#)
- [Comments Received](#)
- [Statement of Policy](#)

#### **Background**

On September 27, 1995 (60 FR 49928), the U.S. Nuclear Regulatory Commission (NRC) published a request for public comment on its policy statement on Conversion to the Metric System [\(1\)](#) in the Federal Register. This request for public comment was in accordance with the Policy Statement published on October 7, 1992 (57 FR 46202), which called for the Commission to determine, after 3 years, whether the policy should be modified.

Before the publication of the request for public comment, the NRC staff contacted various industrial, standards, and governmental organizations to determine their view of the policy. The organizations contacted included the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), the American Society of Mechanical Engineers (ASME), the Institute of Electrical and Electronics Engineers (IEEE), Inc., the Nuclear Energy Institute (NEI), the Nuclear Utility Backfitting and Reform Group (NUBARG), the United States Pharmacopeial Convention (USP), Inc., the Society of Nuclear Medicine, and the Organization of Agreement States (OAS).

#### **Comments Received**

With few exceptions, these various organizations stated their support for the current NRC policy. The nuclear power industry position seems to be exemplified by the NEI comments in which they continue to support the current NRC Metrification Policy and "a transition to the metric system that is market-driven and avoids a sudden or precipitous move to conduct licensing and regulatory matters in metric units."

As for the standards-setting groups, ASME strongly supports the Omnibus Trade and Competitiveness Act [\(2\)](#) and believes that the NRC policy is in accordance with those requirements. IEEE related that its "standards are to be primarily metric beginning in 1998 and, with minor exceptions, exclusively metric beginning in 2000." Also, IEEE believes that the United States Government "can and should do more than it has done to further the metrification process in this country." In response to the NRC's request, IEEE provided the following three comments relating directly to the NRC's position:

(1) The NRC should drop the use of dual units in its publications and to use "metric units exclusively except where doing

so would clearly be detrimental to public health and safety."

(2) The NRC policy of using the English system for all event reporting and emergency response communications, although prudent in 1992, may now cause confusion and have a negative impact after various relevant standards have been converted.

(3) The NRC should include the following statement in its policy: "Nothing in this statement of policy should be interpreted to require the use of the English system of measurement, or to forbid the use of consensus based standards that are exclusively metric." This was proposed so those in the private sector who wish to move faster than the Government may be protected.

With respect to IEEE's first comment concerning the dropping of dual units, the NRC believes that because of the relatively low number of licensees operating in the metric system, it would not be beneficial to make such a change, especially because it would not lead to any improvement in the public health and safety. IEEE's second comment calls for dropping that portion of the policy requiring event reporting and emergency communication between licensees and any Government agency to be in the English system of measurement. IEEE believes that the English-only event reporting and emergency communication may have a negative impact after various relevant standards have been converted to the metric system. To consider such a change is premature, because the standards referred to by IEEE have not been converted. The IEEE's last comment calls for the insertion of a statement noting that use of the English system is not required and that the use of metric standards is not prohibited. This statement is consistent with the NRC policy as written, with the exception of the use of the English system in event reporting and emergency communication as discussed above.

The USP pointed out that the use of dual units by NRC is in line with USP's position and practice. However, the OAS position is that "to be truly responsive to Congress the Commission now should go on record as requiring the use of SI units in all its communication and documentation." Also, OAS recommended that the NRC "support the dual citation standard with the SI unit appearing first and the English or special units following in brackets or parentheses" to accommodate the editing style of the various States. As noted in the October 7, 1992, Federal Register notice announcing the NRC's metrification policy, the NRC believed and continues to believe that if metrification were made mandatory by a rulemaking, no corresponding improvement in public health and safety would result but costs would be incurred without benefit. The editing style recommended by OAS is consistent with NRC policy.

Comments were not received from the remaining groups contacted by the NRC staff.

Four letters were received in response to the September 27, 1995, request for public comment. They were from NEI and three nuclear power utilities. NEI's statement remained consistent with their earlier positions on metrification, namely that they did not believe that it would be in the best interest of safety for the NRC to require nuclear power reactors to be operated using SI units. Also, NEI continues to support the NRC's policy and recommended that the policy remain unchanged.

With respect to the individual utilities which responded, one requested that the NRC not change the part of the policy which requires that all event reporting and emergency response communications between licensees and any Government authority be in the English system of measurement. Another utility endorsed NEI's position and believes the existing policy is reasonable. The third utility also endorsed the NEI position and "strongly discourage(d)" any change to that part of the policy requiring event reporting and emergency response communications between licensees and any Government authorities to be in the English system of measurement.

### **Statement of Policy**

The Commission's policy on Conversion to the Metric System remains essentially as stated in the Federal Register (57 FR 46202) of October 7, 1992.

The NRC supports and encourages the use of the metric system of measurement by licensed nuclear industry. In order to facilitate the use of the metric system by licensees and applicants, beginning January 7, 1993, the NRC will publish the following documents in dual units: New regulations, major amendments to existing regulations, regulatory guides, NUREG-series documents, policy statements, information notices, generic letters, bulletins, and all written communications directed to the public.

Documents specific to a licensee, such as inspection reports and docketed material dealing with a particular licensee, will be in the system of units employed by the licensee. This protocol reflects a general approach that only documents applicable to all licensees, or to all licensees of a given type in which a licensee may operate in the metric system will contain dual units. Otherwise, English or metric units alone are permissible. In dual-unit documents, the first unit presented will be in the International System of Units with the English unit shown in brackets. The NRC will modify existing documents and procedures as needed to facilitate use of the metric system by licensees and applicants. In addition, the NRC will provide staff training as needed. Further, through its participation in national, international, professional, and industry standards organizations and committees and through its work with other industry organizations and groups,

the NRC will encourage and further the use of the metric system in formulating and adopting standards and policies for the licensed nuclear industry. However, if the NRC concludes that the use of any particular system of measurement would be detrimental to the public health and safety, the Commission will proscribe the use of that system by regulation, order, or other appropriate means. In particular, all event reporting and emergency response communications between licensees, the NRC, and State and local authorities will be in the English system of measurement. Further, the NRC will follow the Federal Acquisition Regulation and the General Services Administration metrification program in executing procurements. Lastly, the Commission considers this policy final and conversion to the metric system complete. The Commission does not intend to revisit this policy unless it is causing an undue burden or hardship.

Dated at Rockville, Maryland, this \_\_\_\_\_ day of \_\_\_\_\_, 1996.

For the Nuclear Regulatory Commission.

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John C. Hoyle,  
Secretary of the Commission.

## PUBLIC ANNOUNCEMENT

### NOTICE OF INTENT TO PUBLISH THE NRC'S FINAL POLICY STATEMENT ON CONVERSION TO THE METRIC SYSTEM

On September 27, 1995, the U. S. Nuclear Regulatory Commission (NRC) published a request for public comment on its existing metrification policy. This action was taken in accordance with the NRC's policy statement of October 7, 1992, in which the Commission was to assess the state of metric use by the licensed nuclear industry in the United States after 3 years to determine whether the policy should be modified. The purpose of this notice is to inform the public of the Commission's decision that its Statement of Policy on Conversion to the Metric System does not need to be modified, that it considers this policy final, and that its conversion to the metric system is complete.

Full details are available in the NRC's final policy statement on this matter, published in the edition of the Federal Register. The notice also may be obtained from the NRC Office of Public Affairs.

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ATTACHMENT 3

The Honorable Dan Schaefer, Chairman  
Subcommittee on Energy and Power  
Committee on Commerce  
United States House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

In the near future, the Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register the enclosed final policy statement on conversion to the metric system. On October 7, 1992 (57 FR 46202), the NRC published its original policy on metrification which called for the NRC to assess the state of metric use by the licensed nuclear industry after 3 years to determine whether the policy should be modified. The NRC believes that no changes are needed to its metrification policy, that this policy is final, and that its conversion to the metric system of measurement is complete.

Sincerely,

Dennis K. Rathbun, Director  
Office of Congressional Affairs

Enclosure: Federal Register Notice

cc: Representative Frank Pallone

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The Honorable Lauch Faircloth, Chairman  
Subcommittee on Clean Air, Wetlands, Private  
Property and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

In the near future, the Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register the enclosed final policy statement on conversion to the metric system. On October 7, 1992 (57 FR 46202), the NRC published its original policy on metrification which called for the NRC to assess the state of metric use by the licensed nuclear industry after 3 years to determine whether the policy should be modified. The NRC believes that no changes are needed to its metrification policy, that this policy is final, and that its conversion to the metric system of measurement is complete.

Sincerely,

Dennis K. Rathbun, Director  
Office of Congressional Affairs

Enclosure: Federal Register Notice

cc: Senator Bob Graham

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1. The metric system refers to units belonging to the Internationale System of Units, which is abbreviated SI (from the French Le Système Internationale d'Unités), as interpreted or modified for use in the United States by the Secretary of Commerce.

2. On August 10, 1988, Congress passed the Omnibus Trade and Competitiveness Act (the Act), (19 USC 2901 et seq.), which amended the Metric Conversion Act of 1975, (15 USC 205a et seq.). Section 5164 of the Act (15 USC 205a) designates the metric system as the preferred system of weights and measures for the United States trade and commerce. The Act also requires that all Federal agencies convert to the metric system of measurement in their procurements, grants, and other business-related activities by the end of fiscal year 1992.