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ASME's Response to the Request for Public Comment on the National Institutes of Standards and Technology (NIST) Draft Plan for Providing Public Access to the Results of Federally Funded Research

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Founded in 1880 as the American Society of Mechanical Engineers, ASME is a not-for-profit professional organization that enables collaboration, knowledge sharing and skill development across all engineering disciplines, while promoting the vital role of the engineer in society. ASME codes and standards, publications, conferences, continuing education, and professional development programs provide a foundation for advancing technical knowledge and a safer world.

With over 80,000 Members, our organization is one of the largest technical publishing operations in the world, offering thousands of titles and some of the most prestigious engineering content in 33 technical journals. ASME serves a wide-ranging engineering community through quality learning, the development of codes and standards, certifications, research, conferences and publications and other forms of outreach. We collaborate with 36 Technical Divisions who employ mechanical engineering principles in the development of many lifesaving and life- improving technologies such as robotic surgery, the artificial heart, prosthetic joints, diagnostics and numerous energy technology applications directly contributing to U.S. progress towards national science and engineering goals.

ASME journals provide extensive, diverse indexes of research articles that span the broad spectrum of engineering topics. ASME supports the goal of Open Access for taxpayer funded research and compliance with government and funder mandates for Open Access publication, including Plan S for European-funded research. ASME offers authors the option to publish their papers hybrid Open Access across all our journals or in the fully Open Access ASME Open Journal of Engineering with payment of an Article Publishing Charge (APC).

ASME continues to offer publication at no cost to an author through traditional subscription access, and we feel this is an important option to preserve for the scholarly publishing community, particularly for institutions and authors with limited financial resources. However, the White House Office of Science and Technology Policy's 2022 guidance, "Ensuring Free, Immediate, and Equitable Access to Federally Funded Research", would eliminate the subscription-based model, resulting in the need for new funding streams to support zero cost-to-author publication.

The peer-reviewed scholarly publications which are included in our journals are not the direct result of the expenditure of taxpayer funds; conversely, they result from a significant publisher investment. Over the years, ASME has dedicated significant resources in innovative platforms that enable exceptional digital peer-review, production, distribution, interoperability, and discovery of the latest scientific and scholarly works to ensure our publications are of the highest quality. Our Digital Collection provides unparalleled depth, breadth and quality of peer-reviewed content and includes: 33 technical journals; 26 conference proceedings (annually); 3,500 journal articles reviewed by over 8,000 subject matter expert editors (annually); and comprised of over 308,000 technical papers and 2,400,000 technical pages.

The current 12-month embargo period allows publishers to recoup at least part of their costs by incentivizing subscriptions for readers who desire immediate access. The subscription model remains a fair and efficient tool for scholarly societies to recover costs associated with publication, including peer review, editing, disseminating, and maintaining increasingly complex and capable data libraries in perpetuity. The new OSTP policy would eliminate the ability to recoup any part of the costs incurred in publishing, leaving smaller institutions that are dependent on this model, including many non-profit organizations with public service missions, resource constrained and marginalized. Rapid implementation of a zero embargo mandate may force many smaller publishers into an APC centered business model. ASME recommends that implementation of the OSTP guidance focus on availability of author accepted manuscript rather than version of record, thereby allowing flexibility to the author and preservation of additional publication options for the research community.

ASME further supports the NIST Draft Plan for Public Comment approach of allowing flexibility for publication "immediately upon publication if law allows and no later than 12 months following publication if publisher policies permit". It is also critical that authors are provided new guidance on how to include reasonable costs associated with publication, including archiving, peer review, submission, curation, management of data, and special handling instructions which may be included in grant proposals or project plan budgets for contracts.

Pre-requisites for ensuring success of the OSTP's new policy across the complex U.S. science and engineering enterprise include:

- Development of economic and sociological impact study and analysis of new public costs resulting from the 2022 OSTP guidance, including scoping to address potential agency demands for content beyond scholarly publication in journals, such as peer-reviewed conference proceedings and other publications
- Development of new guidance to authors/researchers on how to budget for new publication and data management costs, including archiving, tagging, and accessibility requirements
- Development of policies to ensure researcher freedom to choose venue of publication, repository, and an appropriate re-use license
- Development of agency metrics and guidelines to support maximation of equitable access to funding

ASME supports sustainable open science by ensuring our peer reviewed scholarly publications are of the highest quality and integrity. By fostering their dissemination, we advance engineering and scientific research to ensure the United States remains globally competitive.

ASME's peer-reviewed journal articles are the direct result of our investments and our extensive collaborations with authors, which is why they are considered the "gold standard" of scientific communication. The ability to recoup our investment enables innovation, allows infrastructure to be developed (including archives and metadata), and provides incentives to try new approaches. Long-term stewardship of content also carries significant costs that are already being borne by publishers.

Any policy change requiring us to make our peer-reviewed publications immediately available for free without charging a fee is not economically sustainable for our organization, as well as other scholarly publishers. A new, sustainable funding model must include clear guidance on how private publication costs will be transferred to a new publicly funded model. The scholarly research and publishing enterprise is a very complex and intricate ecosystem. We must be able to recoup our investments in order to publish high quality peer reviewed journals and research articles, as well as to sustain collaborations of this nature.

How can NIST ensure equity in publication opportunities?

While immediate open access is often couched in terms of expanding access in equity terms, for researchers it threatens to create a pay-to-play system benefiting well-resourced institutions and researchers. While large corporations and well-funded universities may be able to absorb new R&D publishing and administrative costs, smaller colleges and companies will struggle to function. For HBCUs, rural institutions, community colleges, and undergraduate-only programs, this policy will further strain already-tight research budgets and marginalize their contributions.

How can NIST ensure public access and accessibility to outputs of NIST-funded research?

Current proposals fail to sufficiently address guidance and budget forecasting for the crucial funding mechanisms which will allow for the peer-reviewed publication of vital research. We encourage Congress and the Administration to closely coordinate with the research and scholarly publishing communities on clear guidance supporting equitable solutions to providing the necessary funding streams to meet the expanded public policy objectives of the revised OSTP Public Access policy.

How can NIST monitor impacts on affected communities—authors and readers alike?

ASME is concerned that current guidance does not sufficiently account for transition to a model where subscriptions are largely eliminated. There is already substantial evidence of subscription cancellation and market consolidation in the face of open access mandates, both in Europe and in the United States. Assertions that expanded Open Access policy objectives can be achieved without any new costs are not supported by any exploration of the state of the scholarly publishing industry. Agencies should also develop planning to account for new peer-review costs, data management costs, including re-investment into expanded public-private databases, costs for maintenance of versions of record and related open access data repositories.

How can NIST improve the plan to provide greater public access to NIST-funded research results?

Open Access APCs are likely to be subject to annual discretionary appropriations from Congress and individual institutional budgetary decisions. Federal agency leaders should develop transparent economic modeling to support elimination of the subscription revenue stream from scholarly publications supporting federally funded researchers, including guidance to researchers on how to account for new open access policy implementation costs. We believe helping researchers understand and budget for costs, as well as NIST and other federal agencies seeking robust and sustainable funding from agency leaders and Congress is the best way to ensure authors at all institutions have a wide array of options to communicate their research.

The United States world-leading professional and scholarly publishing sector provides a strong foundation for scientific integrity globally, but this sector requires a strong enabling framework of copyrights and intellectual property protections to sustain it, especially in the face of growing technological means of undermining existing copyright protections. It is important that federal agencies do not force researchers into untenable rights or licensing agreements that could suppress researcher choice in how they communicate their research. Researchers need flexibility, including non-commercial, non- derivative versions that allow them to protect the integrity of their work. Agency requirements restricting authors' ability to license their rights, for example through a rights retention mandate, would significantly limit authors' options to bring their work to the scientific community, thereby increasing costs and limiting equity options.

An industry-university-government partnership is essential to the progress of science, engineering and education, and we look forward to working with the NIST to ensure that scientific information itself

remain free from political interference to the maximum extent possible. As agencies consider societal communication of scientific and technical information, it is critical that science and engineering communicators have a healthy degree of freedom of choice in how and where they can publish, as well as separation from the appearance of undue government influence in the preparation and publication of scientific information. This issue is especially salient as society struggles with scientific disinformation and mistrust in government institutions.

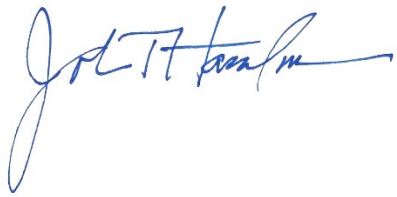
The erosion of copyrights for independent technical and scholarly publishers risks driving further consolidation of the publishing industry into fewer distribution mediums, a dynamic fundamentally at odds with maintenance of a healthy, competitive, innovative, and independent scholarly publishing ecosystem.

ASME continues to accelerate public access while advancing engineering and technological research to ensure the United States remains a global leader in engineering innovation. While ASME endorses the dissemination of the results of all peer-reviewed research, including research supported by federal funding, it must be done in a manner that is sustainable for the scholarly publishing community and civil scientific societies or research organizations not supported by federal funding.

ASME supports the goal of significantly enhancing public access to federally funded scientific research, but cautions that careful consideration be given to decisions that may have serious implications for the financial sustainability of scholarly publishers and professional societies, the availability of public funding to support enhanced public access goals, the accessibility and equitability of research funding, the preservation of the peer review process, and the independence of scientific publishing from undue political influence.

Thank you for your consideration of our views. If we can be of further assistance, please do not hesitate to contact Paul Fakes, ASME Director of Government Relations, at FakesP@asme.org or 202-785-7480.

Sincerely,



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