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Subject: RIN 0694-AH80, Identification and Review of Controls for Certain Foundational Technologies  
ANPRM

The Council on Governmental Relations (COGR), Association of American Universities (AAU), Association of Public and Land-grant Universities (APLU), American Council on Education (ACE), and Association of American Medical Colleges (AAMC) write in response to the U.S. Department of Commerce Bureau of Industry and Security (BIS) Advance Notice of Proposed Rulemaking (ANPRM) regarding the Review of Controls for Certain Foundational Technologies. Together, COGR, AAU, APLU, ACE and AAMC represent all major research universities and medical schools in the United States. Our associations welcome the opportunity to comment on the ANPRM and appreciate the effort the Department of Commerce is undertaking to draw upon all available government, industry, and academic resources to identify and then propose appropriate controls on uncontrolled foundational technologies essential to the national security of the United States, consistent with the

requirements set forth in the Export Control Reform Act of 2018 (ECRA). We also appreciated the opportunity to comment on the previous BIS ANPRM on Controls for Certain Emerging Technologies (RIN 0694-AH61).

Foundational technologies, as the ANPR points out, are essential to innovation. Thus, particular care needs to be taken to assure that any controls imposed on such technologies are not unnecessarily broad and do not result in unintended consequences with regard to the further development and use of such technologies and U.S. economic competitiveness. We are particularly concerned about the potential for such adverse effects with any expansion of controls over items currently classified as “EAR 99” under the Export Administration Regulations (EAR).

## **BACKGROUND:**

The academic research community is increasingly global. U.S. universities attract and educate talented international students, employ leading foreign scholars, foster research collaborations with peers around the world, and support workforce development by developing cutting-edge research that is licensed and commercialized by U.S. companies. Key to these activities is the existence of an open research environment where faculty and students can share information and learn from one another. While we are actively implementing new strategies and approached to address the serious national security concerns related to inappropriate foreign influence, those concerns do not outweigh the value of continued open research environments on our campuses.

Our associations are pleased that the proposed rule explicitly preserves “fundamental research” as defined in Part 734.8 of the EAR. The ANPR recognizes that fundamental research is not subject to the EAR, and that there is no intent to expand jurisdiction over it. Our understanding is that this means that universities and their researchers will remain free to publish the results of academic research in fields designated for consideration as foundational technologies, so long as that research is conducted without prior notice of restriction on participation in the research activity, or publication of the research results. In defining foundational technologies, the Bureau of Industry and Security (BIS) should preserve the core principle of National Security Decision Directive 189 (NSDD 189) that, to the maximum extent possible, fundamental research should remain unrestricted.

## **RECOMMENDATIONS:**

BIS must be careful not to impose overly broad controls on foundational technology areas. Foundational technologies are already in existence, and in many or most cases will have worldwide availability. Such technologies are also likely to be widely available on U.S. campuses for use in research and teaching. Any new controls imposed on foundational technologies should include “use” as defined in the EAR Part 772.1 to the maximum extent possible in order to not create excessive controls and associated administrative burden on the conduct of fundamental research at U.S. academic institutions. Overly broad or vague controls will result in unnecessary restrictions that will stifle scientific progress and impede research.

Any new controls should be consistent with the existing Export Control Classification Number (ECCN) structure and EAR definitions, such as “technology,” “development,” and “required.” These elements of the regulations have been finalized and refined over decades of interaction with industry and our global multilateral export control arrangements. Though complex, they are nonetheless a well-tested and coherent structure of controls and definitions. They allow the U.S. government to accomplish its national security objectives in a way that domestic and foreign industry, as well as the academic community, understands and with which they can readily comply. Moreover, the structure and definitions largely prevent inadvertent over-controls of technology, or portions of technology, that can merely be capable for use with a sensitive item but do not warrant control because they are common to non-sensitive applications.

Our associations strongly urge BIS to exclude from the definitions, and all other technology control efforts, requirements that are open-ended or difficult to comply with, such as setting a control parameter using the phrase “capable for use with.” For export controls to further their national security objectives, U.S. exporters and foreign re-exporters with a wide range of experiences will need to be able to understand the control parameters so that they are able to comply with them. If parameters require a level of knowledge about national security concepts or military applications not generally available to the public, the controls will not be effective.

Additionally, not all controls need to be imposed for exports and re-exports worldwide. BIS has complete discretion to impose unilateral controls on exports and re-exports to specific countries or country groups. Thus, the impact of potential new controls can and should be tailored to specific risks posed by specific countries. This is particularly true in the case of foundational technologies where in most cases availability will not be limited to the United States.

As an alternative to list-based controls, BIS should focus on end use and end user controls for foundational technologies. Such an approach would eliminate confusion by focusing controls on specific national security threats/concerns, and it would prevent overcontrol that is potentially harmful to U.S. economic interests where there is current wide international availability of the technologies. BIS should evaluate the discrete or unique functional contribution of a commodity or technology to the military, law enforcement, or intelligence end use to help determine whether it should be controlled. BIS also should work with national security agencies to specifically identify problematic end users and should make the lists of those persons publicly available. Doing so promotes transparency and reduces burden on U.S. persons by providing clarity on prohibited and licensable transactions.

ECRA 4817 requires a robust interagency process to identify foundational technologies of concern. It further states that identification efforts should include consultation with the Emerging Technology and Research (now Emerging Technology Technical) Advisory Committee (ETTAC). We encourage BIS to ensure that the ETTAC includes adequate representation from the academic community. BIS should assure that ETTAC involves leading researchers with expertise in the foundational technologies under consideration, as well as university officials who are charged with the enforcement of export control regulations. We also support the *ad*

*hoc* participation of academic experts in the specific fields under consideration at ETTAC meetings where sufficient expertise may not exist among the standing academic members of the committee. In the event BIS considers the creation of a parallel Foundational Technology Technical Advisory Committee, we would extend similar comments.

When foundational technologies are identified for control, BIS should work within multilateral regimes for the imposition of such controls to the maximum extent possible. Failing to do so, particularly when the technology has international availability, disadvantages U.S. entities and stifles technological advances. In addition to having sound national security reasons for the imposition of controls, there should be due consideration of whether the proposed control(s) will have the desired effect in promoting national security interests.

We note that the ECRA requirements include regulatory review and comment prior to the implementation of new controls. We encourage BIS to also develop a process for periodic review and comment on the effectiveness of controls on foundational technologies and identification of when they are no longer required.

## **CONCLUSION**

Controls on foundational technology should be the minimum necessary to address the specific national security concern posed by the technology. BIS should be transparent in how foundational technologies are identified, how appropriate controls are selected, and how the effectiveness of the controls is measured. Foundational technologies should be controlled in a manner that supports the “use” of such technologies in fundamental research. This will assist U.S. academic institutions in continuing to conduct cutting edge research and to utilize the best scientists and engineers from around the world to support U.S. scientific leadership, technological innovation, economic competitiveness and national security.

The Association of American Medical Colleges (AAMC) is dedicated to transforming health care through innovative medical education, cutting-edge patient care, and groundbreaking medical research. Its members comprise all 155 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems; and more than 70 academic societies. The Association of American Universities (AAU) is an association of 63 U.S. and two Canadian leading research universities that transform lives through education, research, and innovation. AAU member universities collectively help shape policy for higher education, science, and innovation; promote best practices in undergraduate and graduate education and strengthen the contributions of leading research universities to American society. The Association of Public and Land-grant Universities (APLU) is a research, policy, and advocacy organization with a membership of over 240 public research universities, land-grant institutions, state university systems, and affiliated organizations in the U.S., Canada, and Mexico, that is dedicated to strengthening and advancing the work of public universities. The Council on Governmental Relations (COGR) is an association of 190 research universities and affiliated academic medical centers and research institutes. COGR concerns itself with the impact of federal regulations, policies, and practices on the performance of research conducted at its member institutions. The American Council on Education (ACE) is the major coordinating body for American higher education. Its more than 1,700 members reflect the extraordinary breadth and contributions of four-year, two-year, public and private colleges and universities. ACE members educate two out of every three students in accredited, degree-granting U.S. institutions.