

BIS Publishes Advance Notice of Proposed Rulemaking to Identify and Review Controls on Foundational Technologies: What's Next?

Key Notes:

- The long-awaited advanced notice of proposed rulemaking (ANPRM) kicks off an intra-agency review process authorized by the Export Control Reform Act to determine what additional export controls should be implemented on foundational technologies essential to U.S. national security.
- The ANPRM signals a change in strategy from BIS's previous issuance of a similar ANPRM for emerging technologies, relying more on industry for guidance on the definition and categories of foundational technologies.
- BIS is accepting Public Comments until October 26, 2020.

The U.S. Department of Commerce's Bureau of Industry and Security (BIS) published in the Federal Register on August 27, 2020 an [advance notice of proposed rulemaking](#) (ANPRM) for foundational technologies. BIS is soliciting public comments until October 26, 2020 to help identify foundational technologies essential to U.S. national security ("Foundational Technologies ANPRM"). This long-awaited ANPRM marks the start of an intra-agency review process implementing a key provision of the Export Control Reform Act of 2018 (ECRA) (see 50 U.S.C. Chapter 58 at § 4817), in which Congress directed BIS to establish controls on the export, re-export and in-country transfers of "foundational technologies." In this bulletin, we summarize what you can expect next from BIS and the key takeaways from this recent BIS action.

What is the Impetus for This ANPRM?

On August 13, 2018, Congress enacted the ECRA as part of the National Defense Authorization Act for Fiscal Year 2019 (NDAA). The ECRA is the permanent statutory authority for the Export Administration Regulations (EAR), which is administered by BIS. In the ECRA, Congress authorized BIS to establish export controls on emerging and foundational technologies. The ECRA did not specifically identify emerging and foundational technologies that should be subject to controls, but instead described them as essential to the national security of the United States and those not already identified as "critical technologies" under section 1703(a)(6) of the Foreign Investment Risk Review Modernization Act (FIRRMA).

What are Emerging and Foundational Technologies?

BIS has addressed "emerging technologies" and "foundational technologies" separately. On November 19, 2018, BIS issued an [ANPRM](#) identifying broad categories of potential emerging technologies ("Emerging Technologies ANPRM"), indicating that a separate notice for foundational technologies was forthcoming. The Emerging Technologies ANPRM identified 14 representative general categories of technology to determine whether there were specific emerging technologies within those that were essential to national security including, but not limited to: biotechnology; artificial intelligence (AI); position, navigation and timing technology; microprocessor

technology; advanced computing technology; data analytics; quantum information and sensing technology; robotics; certain logistics technology; additive manufacturing; brain-computer interfaces; hypersonics; advanced materials; and advanced surveillance technologies. For more information on the emerging technologies ANPRM, please see Thompson Hine [Update of November 19, 2018](#).

On January 6, 2020, BIS issued the first of several expected “emerging technology” [interim final rules](#) to control artificial-intelligence based software specifically designed to automate geospatial imagery analysis and point clouds to ECCN 0D521, which as of that date requires an export license for export or re-export to all destinations except Canada.

The Foundational Technologies ANPRM, published on August 27, 2020, did not similarly identify representative categories of foundational technologies, but did provide some useful examples for the types of end-uses and end-users that may trigger controls. Specifically, this ANPRM seeks industry guidance to identify the types of “enabling technologies, including tooling, testing and certification equipment” that should be subject to additional controls, and included the following examples:

- Semiconductor manufacturing equipment and associated software, tools, lasers, sensors and underwater systems that can be tied to indigenous military innovation efforts in China, Russia or Venezuela;
- Items designated as EAR99 or controlled only for anti-terrorism that are utilized or required for innovation in developing weapons, enabling foreign intelligence collection activities, or weapons of mass destruction applications; and
- Technologies that have been the subject of illicit procurement attempts which may demonstrate some level of dependency on U.S. technologies to further foreign military or intelligence capabilities in countries of concern or development of weapons of mass destruction.

The ANPRM states that foundational technology is something that is “essential to innovation” and “essential to the national security of the United States,” and it also notes

that the term includes not only “technology” but also “commodities” and software.” Ultimately, it may be that some foundational technology may be broadly controlled under a Commerce Control List (CCL) category in the EAR; however, it appears likely that the determination of whether much foundational technology is controlled will depend on specific applications or end-uses under any final Rule. BIS officials have stated that the rulemaking is focused on ensuring that other countries do not gain an advantage over the United States.

Key Takeaways from the Foundational Technologies ANPRM

1. There are no new controls, yet.

As noted, the Foundational Technologies ANPRM seeks guidance from industry to identify foundational technologies warranting additional controls. The ANPRM itself, however, does not provide a list or categories of the specific items to seek public reaction. Thus, the first round of comments may be fairly general and lead to a second proposed rulemaking. Interested parties and industry members will have until October 26, 2020 to submit public comments on what the items should be and the impact of any export controls. New controls on foundational technologies do not appear to be imminent. However, BIS may issue interim rules on specific technologies prior to broader action, as they have done for certain “emerging” technologies.

2. BIS did not provide much detail on what foundational technologies it intends to control.

Unlike the Emerging Technologies ANPRM, the Foundational Technologies ANPRM does not provide a list of specific categories BIS is considering for export controls. However, it does provide some useful examples of the type of foundational technology BIS is focusing on and potential applications. For example, the controls will likely be limited to those relevant to manufacturing, testing and certification tools, systems and software, with the following potential applications: semi-conductor manufacturing, weapons of mass destruction, data analysis collection and surveillance.

The lack of detail may signal the difficulty inherent in controlling foundational technology.

3. BIS appears to focus on military end-use and end-user restrictions for foundational technologies.

The examples in the Foundational Technologies ANPRM focus on national security issues tied to specific end-uses or end-users. For example, technologies used: (i) for indigenous military innovation efforts in China, Russia or Venezuela; (ii) to enable innovation in developing weapons, enabling foreign intelligence collection activities, or weapons of mass destruction; or (iii) further foreign military or intelligence capabilities in countries of concern or development of weapons of mass destruction. The result of this rulemaking may be new controls that only apply to certain end-users or end-uses, unlike most current controls that are country-based.

How Will These Controls Impact Foreign Investment and CFIUS?

FIRRMA, also a part of the NDAA, added “emerging and foundational technologies” to the list of critical technologies from a national security perspective. The Committee on Foreign Investment in the United States (CFIUS) has implemented rules mandating notification to CFIUS of certain foreign investment in companies with critical technology.

Given the lack of specific detail in the Foundational Technologies ANPRM, it’s even more important for investors and exporters to monitor any new controls on foundational technologies that may emerge in the coming months. New BIS controls may affect the scope of CFIUS jurisdiction in the coming months.

How Can I Submit Public Comments on Foundational Technologies to BIS?

BIS is seeking industry guidance on the following topics:

1. How to define foundational technology;
2. Sources to identify such items;
3. Criteria to determine whether AT controlled or EAR99 items, for which a license is not required to

countries subject to a U.S. arms embargo, are essential to U.S. national security;

4. Status of development of foundational technologies in the U.S. and elsewhere;
5. The impact of specific foundational technology controls on U.S. industry;
6. Examples of implementing controls based on end-use and/or end-user only;
7. Examples of enabling technologies, including tooling, testing and certification equipment that should be included within the scope of a foundational technology; and
8. Other approaches to the issue of identifying foundational technologies important to U.S. national security.

Interested parties may submit public comments in response to the Foundational Technologies ANPRM until October 26, 2020, as follows:

- Through the *Federal eRulemaking Portal*: <http://www.regulations.gov>, referencing the rulemaking identification number BIS-2020-0029; or
- By mail or delivery to: Regulatory Policy Division, Bureau of Industry and Security, U.S. Department of Commerce, Room 2099B, 14th Street and Pennsylvania Avenue NW, Washington, DC 20230, referencing RIN 0694-AH80.

Thompson Hine LLP’s [International Trade](#) practice group has extensive experience in export controls and addressing concerns and submitting comments to BIS in rulemaking notices.

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