

GIBSON DUNN



International Trade Update

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United States Deploys New Playbook for Plurilateral Export Controls on Advanced and Emerging Technologies

The new regulations control quantum computing, advanced semiconductor items, and additive manufacturing technologies.

On September 6, 2024, the Department of Commerce's Bureau of Industry and Security (BIS) [published](#) new regulations to control certain advanced and emerging technologies, including quantum computing, semiconductor manufacturing equipment, Gate All-Around Field-Effect Transistor (GAAFET) technology, and additive manufacturing.^[1] The regulations—which were effective when issued but published as an interim final rule (IFR)—are noteworthy because they introduce tools to both build and recognize new *ad hoc* agreements with like-minded nations on export controls to regulate advanced and emerging technologies, an objective that has been more and more out of reach due to the inability to achieve consensus through the broader multilateral Wassenaar Arrangement (WA) process. This IFR is a key example of BIS's efforts to enhance international collaboration among U.S. allies and key suppliers of critical inputs for advanced and emerging technologies to implement consistent export controls. Specifically, in the regulations, BIS creates a new License Exception Implemented Export Controls (IEC) to recognize and reward countries who impose similar export controls with easier access to the technology, software, and commodities that enable the development of emerging technologies. BIS also continues a several-year experiment with modified deemed export controls. The new deemed export control framework created by the regulations will help ensure that the United States retains and continues to attract the international talent now working with U.S. universities, research institutes, and companies in advanced and emerging technologies and

that BIS's new export controls will not disrupt the work of non-U.S. collaborators with individual license requirements for foreign nationals on their teams. The regulations became effective on September 6, 2024, however, parties transferring certain quantum technologies to Wassenaar participating states are not required to comply with corresponding license requirements until November 5, 2024.

I. Major features of the Interim Final Rule

BIS's first step toward reaching a new agreement among like-minded countries on the regulation of advanced and emerging technologies represents a departure from BIS's typical process of achieving consensus through iterative working group and plenary meetings of the WA. The WA is a voluntary agreement among participating states (today 42 states participate) to control the export of conventional arms and certain dual-use goods to contribute to regional and international security. Although certain states such as Israel, the People's Republic of China, and Singapore do not participate in WA, the influence of the WA control lists extends beyond the current membership of the WA because many non-participating countries opt to adopt most or all of the same control parameters and exclusions into their own national controls. The specific items that are described on the WA control lists change from year to year through the adoption of amendments to the control lists at annual plenary meetings. However, the ability of the United States and many like-minded countries to reach consensus on the adoption of new controls on several advanced and emerging technologies has been stymied in recent years by the refusal of the Russian Federation, among others, to support the imposition of new controls.

In its new regulations, BIS seeks to encourage the development of new plurilateral controls outside the WA and *without* the Russian Federation's support. Since the export control reform efforts of the 2010s, the United States and many observers have described the goal of U.S. export controls as building higher fences around smaller yards. The new framework is designed to enable the United States to coordinate faster fence building in other countries' yards where critical advances in emerging technologies are also occurring. In the IFR, BIS achieves this aim by imposing new permutations of world-wide licensing requirements on the export, reexport, and in-country transfer (collectively, "export") of specified items and by creating a new license exception—License Exception IEC—which authorizes exports to and among countries who implement similar export control licensing requirements on these technologies.

A. Adds new, and revises existing Export Control Classification Numbers (ECCNs) to identify controls on emerging advanced quantum computing, semiconductor manufacturing, GAAFET technology, and additive manufacturing technologies

BIS imposes its new, worldwide licensing requirements on the targeted technologies through amendments to the Export Administration Regulations's (EAR's) Commerce Control List (CCL)^[2] which now includes additional ECCN entries for certain commodities, software, and technology that enable the design, manufacture, and functionality of (1) quantum computers, (2) semiconductor devices and circuitry, (3) high-performance computing chips, and (4) additive manufacturing items that produce metal or metal alloy components. Examples of listed items in the interim rule include quantum computers and related electronic assemblies and components; cryogenic cooling systems and components; complimentary metal-oxide semiconductor (CMOS) integrated circuits; technology for the development or production of integrated circuits or devices, using GAAFET structures; additive manufacturing equipment, designed to produce metal or metal

alloy components; and, technology related to coating systems; among others. The newly-controlled commodities, software, and technology can be found at the following ECCNs: 2B910, 2D910, 2E903, 2E910, 3A901, 3A904, 3B903, 3B904, 3C907, 3C908, 3C909, 3D901, 3D907, 3E901, 3E905, 4A906, 4D906, and 4E906. The IFR also revises the following nine ECCNs: 2E003, 3A001, 3B001, 3C001, 3D001, 3D002, 3E001, 4D001, and 4E001, which are ECCNs that have historically reflected WA controls, to include certain newly-controlled items.

BIS also amends the EAR to enable the agency to more easily identify these and other emerging technologies that it plans to make subject to non-WA-based worldwide export control licensing requirements. Specifically, these items will be assigned ECCNs with a third digit of “9” and the fourth digit as a number from 0 to 7 (i.e., 3A901).

B. BIS creates a new license exception and adopts new licensing policies that favor exports to like-minded and allied countries

While the new controls on emerging technologies are similar to BIS’s existing controls on other ECCNs controlled for national security and regional stability reasons, BIS will make available a more limited set of license exceptions and will apply different licensing review policies. BIS amends the EAR to create a new License Exception IEC, which authorizes the export of specific technologies to countries that have agreed to adopt the same technical parameters and restrictions in their own export control regimes. And for those countries who have not adopted similar controls, BIS will apply new license review policies that are keyed to the EAR’s country groups, reflective in part of a given state’s participation in different multilateral agreements and U.S. national security determinations and arms embargoes.^[3] Thus, when a proposed export involves items controlled by one of the new or modified ECCNs to a country that has not yet implemented similar controls, BIS will apply a presumption of approval for destinations specified in Country Groups A:1 (which includes all WA countries), A:5, and A:6, a presumption of denial for destinations specified in Country Groups D:1 (countries designated for U.S. national security reasons) and D:5 (countries subject to U.S. or UN arms embargoes), and a case-by-case review policy for destinations for the remaining balance of countries.

Alongside the creation of the new License Exception IEC, BIS makes a procedural change to more immediately reward countries that adopt parallel controls. Specifically, BIS bypasses the need to publish every change related to IEC exception availability through *Federal Register* notices. BIS does this by developing a mechanism to more quickly identify countries that have implemented the same controls through a cross-referenced list that will be available outside of the *Federal Register* publication. This new [License Exception IEC Eligible Items and Destinations](#) list will be maintained by BIS, hosted by the National Archives and Records Administration, and made available by a BIS website hyperlink. By maintaining the list outside of the *Federal Register*, BIS will be able to more quickly expand the applicability of License Exception IEC by ECCN and by country when a given country adopts sufficient controls. Were BIS obligated to reflect each of these changes in *Federal Register* notices, collaborators in the United States and like-minded countries would possibly need to wait months, rather than weeks or days, after their governments reached agreement on new controls to take advantage of the new IEC authorization.

C. BIS uses General Orders to grandfather and authorize exports of specific advanced technologies in recognition of a limited, global talent pool

Over the past two years, BIS has grappled with the challenge of ensuring its new controls on emerging technologies do not disrupt ongoing work involving foreign nationals in the United States or dissuade talented foreign nationals from seeking employment in the United States or in other countries whose companies collaborate with U.S. companies. This disruption can occur when licensing controls are placed on the release of software and technology to non-U.S. persons. These transfers to non-U.S. persons located in the United States are referred to as “deemed exports,” because the release of controlled technology and software to foreign persons is deemed to be an export to the person’s most recent country of citizenship or legal permanent residence. Similarly, a deemed reexport occurs when software or technology is released to a foreign person of a country other than the foreign country of the entity authorized to receive the controlled technology (e.g., a Syrian national employed by a company in France). Given the scarcity of individuals with expertise in many areas of emerging technology and that many specially trained foreign nationals come from jurisdictions that often trigger export control licensing requirements such as China, BIS’s new approach to foreign national licensing is critical to ensuring that the United States does not undermine ongoing work involving emerging technologies and that U.S. companies can continue to recruit the talent they need to advance such activities.

BIS’s experiment with foreign national licensing in the context of advance technology exports started in October 2022, when BIS [included](#) an exclusion from the requirement to seek deemed export licenses for certain advanced semiconductor controls and other specified items, such as items related to advanced computing chips and computer technologies, controlled for new “regional stability” purposes. In October 2023, BIS [issued](#) additional semiconductor controls and clarifications, which included updated ECCN item tables so as to “not undermine the deemed export and reexport exclusion.”^[4] BIS underscored in the same interim rule its interest in receiving comments from businesses on the impact of deemed export provisions which BIS could use to better inform potential additional changes to deemed export licensing requirements. Finally, in April 2024, BIS [released](#) its most recent round of clarifications concerning semiconductor controls and reiterated that such controls did not require licensing for the deemed export or reexport of items controlled for “national security” reasons.

The present IFR introduces a few new permutations of deemed export authorizations. The first authorization grandfathers U.S. and non-U.S. entities who had hired foreign national contractors or employees to advance their work as of the effective date of BIS’s new controls (i.e., September 6, 2024), except for those working with certain GAAFET technology.^[5] BIS also opted to wholly exclude from deemed export and reexport requirements the release of certain advanced semiconductor technology and software and to partially exclude other semiconductor manufacturing and quantum technology and software for all foreign nationals except those from Group D:1 countries, which are subject to U.S. national security export licensing requirements, and D:5 countries, which are subject to U.S. or United Nations arms embargoes.^[6]

To authorize Group D:1 and Group D:5 foreign nationals’ access to controlled software and technology, BIS issues more specific authorizations through general orders, which provide the required authorization subject to certain reporting requirements. One general order authorizes Group D:1 and Group D:5 foreign nationals working as contractors or employees of entities and

having access to the newly controlled GAAFET technology, provided that the individuals were supporting GAAFET technology projects as of September 6, 2024.^[7] BIS also created a parallel authorization for foreign nationals from the same jurisdictions supporting work with newly controlled quantum technologies, though without a restriction on when these foreign nationals were hired or assigned to supporting these projects.^[8] To take advantage of the general licenses, exporters are obligated to file annual reports with BIS (due for 2024 on November 4, 2024 and on February 1 for every year thereafter) that detail the GAAFET and quantum software and technology that the foreign nationals are using or to which they otherwise receiving access in their work, as well as reports concerning the voluntary or involuntary termination of such employees.

Although the *Federal Register* notice does not offer a specific rationale for the new annual reporting requirements, BIS will be able to use the information gathered to help trace where the contractors and employees authorized to work with these advanced technologies go when their work terminates. In accordance with newly added 15 C.F.R. §§ 743.7 and 743.8, entities must report the identity of the foreign personnel, the specific technology in question, when the person is terminated, and whether, upon termination, the person intends to go to a destination specified in Country Group D:1 or D:5. The introduction of a regulatory requirement to that will allow BIS to track the movement of foreign national employees who are advancing the leading edges of emerging technologies is unprecedented, but may serve as the model for similar authorizations that BIS will extend to foreign nationals working with other emerging technologies.

Use of the export, reexport, and deemed export and reexport licenses set forth in clauses (f)(1) and (f)(2) of General Order No. 6 (which license certain GAAFET exports, reexports, and deemed exports and reexports ongoing prior to September 6, 2024) are also conditioned on the specific application of the technology and software. In particular, although these general licenses extend to companies located in Country Groups A:5 and A:6, they expressly exclude any companies that are working at the direction of companies headquartered or whose ultimate parent is located in a sensitive jurisdiction (Country Groups D:1 or D:5) to develop or produce certain controlled items. Thus, for example, the authorization could not be used to support GAAFET or quantum development or production projects being directed by companies in China or other listed jurisdictions.

II. More fences around more yards, more quickly

The set of amendments that BIS implements through the IFR are among the more complex we have seen. The rule reflects the increasingly innovative tools BIS is employing to address the complicated issues that have arisen over the last two years in imposing controls on emerging technologies advanced semiconductor, semiconductor manufacturing, and supercomputing technologies. Moreover, BIS's new License Exception IEC and novel use of grandfathering and general orders to mitigate the impact of new controls on the multinational teams collaborating to advance emerging technologies, among other rule features, constitute a playbook, and a new set of regulatory tools, for BIS to recruit like-minded countries to implement important controls outside of the consensus restraints associated with the WA.

Other countries are already adopting equivalent export controls concerning quantum computing and other technologies that will make them eligible for License Exception IEC. For example, on

September 7, 2024, a day after the IFR took effect, the Netherlands [amended](#) its Regulation on Advanced Production Equipment for Semiconductors to require chip manufacturing giant ASML to apply for a Netherlands export license—rather than a U.S. export license—in order to export its TWINSCAN NXT:1970i and 1980i DUV immersion lithography systems outside the European Union. This amendment, which follows the Netherlands’ original restrictions [targeting deep ultraviolet light machines](#) (promulgated in September 2023), has the practical effect of building new walls around the flow of semiconductor manufacturing equipment to sensitive jurisdictions like China. ASML [noted](#) in an official statement, that it “believes this requirement will harmonize the approach for issuing export licenses.”

We expect other nations to similarly mirror IEC items licensing requirements and potential exclusions for quantum computing and other emerging technologies in the coming months. In response to the U.S. controls, as well as any potential future controls imposed by like-minded states, companies in the quantum computing, semiconductor manufacturing, GAAFET technology, and additive manufacturing industry should re-evaluate their previous item classifications, update deemed export and reexport policies as needed, and ensure that any required reports are filed in a timely manner. Companies operating in these industries should also evaluate the potential applicability of License Exception IEC—as well as related licensing policies—to their products. Finally, companies in these industries may wish to consider revising or re-evaluating human resources policies in order to more effectively comply with the above-described controls and authorizations relating to foreign nationals’ access to controlled software and technology.

[\[1\]](#) See Commerce Control List Additions and Revisions; Implementation of Controls on Advanced Technologies Consistent With Controls Implemented by International Partners, 89 Fed. Reg. 72,926 (Sept. 6, 2024).

[\[2\]](#) See 15 C.F.R. Part 774, Supplement No. 1.

[\[3\]](#) See 15 C.F.R. Part 740, Supplement No. 1.

[\[4\]](#) Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections, 88 Fed. Reg. 73,458, 73,485 (Oct. 25, 2023) (codified at 15 C.F.R. § 774, Supplement No. 1).

[\[5\]](#) Commerce Control List Additions and Revisions; Implementation of Controls on Advanced Technologies Consistent with Controls Implemented by International Partners, 89 Fed. Reg. 72,926, 72,929 (Sept. 6, 2024) (to be codified at 15 C.F.R. §§ 742.4(a)(5)(i) & 742.6(a)(10)(i)).

[\[6\]](#) *Id.* at 72,929.

[\[7\]](#) *Id.* at 72,936 (to be codified at 15 C.F.R. Part 736, Supplement No. 1, General Order No. 6, subsections (f)(1) and (f)(2)).

[\[8\]](#) *Id.* at 72,936 (to be codified at 15 C.F.R. Part 736, Supplement No. 1, General Order No. 6, subsection (f)(3)).

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Gibson Dunn lawyers are monitoring the proposed changes to U.S. export control laws closely and are available to counsel clients regarding potential or ongoing transactions and other compliance or public policy concerns.

Gibson Dunn's lawyers are available to assist in addressing any questions you may have regarding these issues. For additional information about how we may assist you, please contact the Gibson Dunn lawyer with whom you usually work, the authors, or the following leaders and members of the firm's [International Trade](#) practice group:

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