

# Semiconductor Export Control Trends Under Trump 2.0 — An Interview with Kevin Wolf

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## Introduction

**Kevin Wolf** is a Non-Resident Senior Fellow at Georgetown's Center for Security and Emerging Technology, and he is also currently a partner in the international trade group of Akin Gump Strauss Hauer & Feld, providing advice regarding export control compliance. Kevin has been working in the area of export control issues since 1993 and served as the Assistant Secretary of Commerce for Export Administration from 2010-2017, where he was responsible for administering U.S. dual-use export control regulations. He was one of the primary drafters and implementers of the Obama Administration's Export Control Reform effort, which significantly modified U.S. defense trade controls involving allied countries. He was also one of the primary Commerce Department representatives to the Committee on Foreign Investment in the United States (CFIUS).

DSET was privileged to speak with Kevin Wolf and gain valuable insights from his extensive experience. The 150-minute interview covered a broad range of topics. Here, we highlight his key assessments of the Trump Administration's potential impact on export control policies.

## A Long-Term Strategic Perspective on U.S. Export Control Policy

**DSET:** Could you walk us through the 16-year policy trajectory across three US presidencies? Are there any key differences in the export-control policy approaches taken by Democratic versus Republican administrations?

**Kevin:** US Presidents from Clinton, and earlier, to Biden have all implemented export controls to achieve national security objectives, but the idea of what is in the national security interests of the United States has evolved.

During the Cold War, there was a broader strategic objective in the use of controls to contain the Soviet Union and the East Bloc. When the Soviet Union fell, there was a significant policy debate in the early 90s about what the role of export controls should be, and the US and its allies ultimately agreed on a relatively straightforward non-proliferation focus.

This meant that, based upon the four multilateral regimes—one for missiles, one for nuclear, one for chemical/biological, and one for conventional military—the types of items (commodities, software, and technology) that were either bespoke for producing, developing, or using weapons of mass destruction or conventional weapons should be controlled. In addition, the dual-use and commercial items that had some significant, identifiable relevance to the development, production, or use of WMDs or conventional weapons should be regulated. (The WMD and conventional weapons themselves, of course, were also controlled by the regimes.)

This non-proliferation focus is reflected in the structure of the American administration's export control system. At the State Department, the Bureau of International Security and Nonproliferation is the lead export control agency. At Defense, it is the Defense Technology Security Administration. At Energy, it's the National Nuclear Security Administration. The fifth original member of the US Government's export control policy making structure was the Arms Control and Disarmament Agency, but it was disbanded in 1999. The role of Commerce's Bureau of Industry and Security (BIS) (formerly called the Bureau of Export Administration) was and remains to shepherd this interagency export control system. That is, BIS's role was and remains basically to consolidate the views of these non-proliferation objectives into the Export Administration Regulations (EAR), to enforce the regulations, and to cooperate with various departments to work with the regimes to keep the lists of controlled items current.

The system that I inherited in 2010 has not changed much between Democrats and Republicans. Starting in 2016 and little earlier, but was not publicly discussed much until 2017 and 2018, were the changes in Chinese state policy and its fusion of

military-civilian use of technology to acquire commercial technologies and modernize the Chinese military. The old (or “classical”) way of export control policy thinking focused on the nature of the item but not on state policies of specific countries or many human rights issues, particularly with respect to mass surveillance activities. This public discussion in 2017 and 2018 resulted in the Export Control Reform Act, with bipartisan support, to require the Commerce Department to think more broadly about the role of export control to identify and control emerging and foundational technologies directly in response to Chinese-specific efforts to use such technologies that did not have a clear, direct relationship to the development, production, or use of a weapon, but were nonetheless important, given the nature of the technology, to China’s broader efforts to advance its industrial base necessary to modernize its military.

**Trump 1.0 did not have a coherent vision of how to define contemporary national security issues and the specific emerging technologies that warranted new controls.** There were many questions asked about what “emerging” and “foundational” technologies should be controlled in addition to those traditionally controlled within the scope of the four regimes. Many different Trump officials had many different opinions on the topic, but there was no one administration-wide answer to the question. It also took inconsistent positions on several matters, such as the revocation by tweet of sanctions against ZTE and the granting of licenses allowing for exports to Huawei. (Traditionally, exports to listed entities were simply prohibited.) The Trump Administration, however, did significantly expand the extraterritorial reach of the EAR against Huawei in August 2020, which was a parallel company-specific concern regarding Huawei given its relationship with the Chinese government and ability to engage in acts contrary to national security interests. The Trump Administration also gets credit using the Entity List tool more directly and aggressively to list companies in China engaged in human rights violations, particularly with respect to mass surveillance and the Uyghur concentration camps.

The Biden administration stayed quiet during its first year on what its export control policies would be. That changed in 2022 with two major events. The first event was the allied response to the Russian invasion of Ukraine. There are now 38 countries that have come together to use export controls outside the classical multilateral regime system to achieve strategic objectives far beyond classical non-proliferation

objectives to slow the parts of Russia's industrial base that are needed to support its continued war against Ukraine. . The second major event was a speech National Security Advisor Jake Sullivan gave in September 2022 where he defined our national security interest as including the need to maintain as large of a lead as possible against China in five primary "force-multiplying" emerging technologies, which are essentially those related to (i) advanced-node semiconductors, including memory, (ii) AI-related applications, (iii) the semiconductor production equipment needed to make such items, (iv) supercomputers, and, separately, (v) biotech. (He also mentioned green energy technology, but that has not been a focus of export control policy thinking.) This was the first coherent articulation by a senior government official regarding what a new vision of export controls should be to address China-specific national security concerns that were broader than the classical non-proliferation objectives that are the mandates of the four multilateral export control regimes.

The Commerce Department implemented in October 2022 significant new amendments to the EAR that implemented NSA Sullivan's vision. Although the rules are extremely complicated, they are simple in their policy objectives, which are to cut off all the inputs, from the US and abroad, of the inputs needed for Chinese companies to have the indigenous capability to develop and produce in China (i) advanced node integrated circuits; (ii) semiconductor production equipment; (iii) the compute necessary for AI-related applications, particularly large language models, and (v) supercomputers. In other words, the US Government determined with these rules that China's capability to produce these four technologies is a per se national security threat. After reviewing how those initial controls worked, the Commerce Department has updated the rules each year, including recently on December 2nd, with even more complex amendments, but always with the same four policy objectives. Whether one agrees with it or not, at least, in my view, the Biden administration articulated a coherent, administration-wide policy vision for how export controls should be used beyond the classical non-proliferation objectives.

This is the policy vision that the Biden team will leave to the Trump team, which will no doubt expand upon it. The general view is that tariffs will be used to give the Trump team leverage to motivate more domestic manufacturing. With respect to what an export control policy vision will be, I do not really know. **President Trump,**

**individually, has never really mentioned export controls and the policy objectives for export controls.** It was not an element of the campaign. The ultimate vision might be more hawkish because Senator Rubio and Mike Waltz will likely become the Secretary of State and National Security Advisor. They have each made statements in the past regarding export control policy and China-specific national security issues. I am unaware of any positions or statements on either issue, however, by Howard Lutnick, the current Department of Commerce pick.

**Moreover, it is possible that the Trump team will be more hostile toward allies, based on positions regarding the allies taken during the first Trump administration.** To prepare the slide deck that I sent you, I read all testimonies and speeches from people who might go into a Trump administration. One idea about retaliation against allies was in a Republican-led appropriation bill from a few months ago that said any allied country company that (legally) exports to China items that a US company could not should be added to the Unverified List, which is a lighter version of the Entity List I have also heard Republicans in conferences say that the Biden administration was too nice to allies regarding imposing controls against China. **Trump, as an individual, can be antagonistic to long-standing arrangements and allies, such as NATO and Taiwan. Also, Trump is widely reported to take a “transactional” approach toward policy. This means that he will negotiate on two or more unrelated topics, whereas the Biden team and the traditional diplomats will look for common values, interests, and principles.**

Eventually, any export control decision-making will be a function of consensus among the four departments, as led by the White House and the National Security Council. So, we really will not know what the Trump administration’s export control policy vision will be until after the administration begins and we learn who the people will be confirmed for the various Assistant and Under Secretary positions in the export control and related agencies. In particular, I have no idea what a Trump administration’s view regarding export controls should be to address non-China specific development of AI-related capabilities outside the United States. The Biden administration is reportedly working on a rule to impose worldwide controls (minus a few close allies) over the inputs for advanced AI capabilities. I am assuming some

portion of that vision will be published before January 20th. If so, it will be interesting to see how much of it survives during the Trump administration.

## **International Multilateral Control Cooperation and Taiwan's Participation**

**DSET:** What's your assessment of the new export control measures announced on Dec 2, 2024 and the multilateral control regime?

**Kevin:** I don't like how some people see that as blocking "loopholes." Sometimes, people refer to policy objectives they would like but that the government deliberately didn't take as a "loophole." But, yes, sometimes the government misses things in its controls. So, I see it more as the government's fine-tuning its controls based on having studied how the previous year's controls worked and after learning more about the technology ecosystem. Remember, the export control agencies were built and staffed to address non-proliferation objectives. Although there are very smart people in government, there are few who understand deeply the technology and the supply chains behind the development and production of advanced node semiconductors, AI applications, semiconductor production equipment, and supercomputers, which now include quantum computers.

Since we last spoke, Commerce published on December 2nd an additional update. This rule, like the others, is extraordinarily and unusually complicated. Even for export control experts, they are hard to understand and ensure compliance. The complexity is a function of several things. First, clearly, the rules reflect informal understandings about what would be acceptable to close allies Japan and the Netherlands. Second, the technologies involved are unusually complicated relative to many of the other types of items the EAR regulates. Third, the Biden administration has tried not to create rules that result in a broad "decoupling" with the Chinese economy. Fourth, for the rules to be more effective, they are extraterritorial in novel ways. That is, the regulations impose controls over foreign-made items outside the United States that do not contain any US-origin content or US person involvement if the items are either produced directly for US technology or produced with equipment that was produced from US technology. These are novel and complex jurisdictional hooks over foreign-made items produced in countries that do not control the same

items in their systems and that are not clearly directly related to the production of weapons.

But, again, **although the new rules are complicated, they all have a very simple objective, though the Biden team has not explicitly described it this way, which is to cut off all the inputs, directly or indirectly, US or foreign, for the indigenous development and production in China of (i) advanced node semiconductors, (ii) the compute side of AI-related applications; (iii) semiconductor production equipment, and (iv) supercomputers.** The first objective focuses on the production of logic, NAND, and DRAM in China or by Chinese companies. (Although I think this may expand to include controls on the export of logic for data centers before January 20th.) The AI-related objectives first focused on GPUs (almost all produced in Taiwan) needed to run large language models. The December 2nd rule added controls on High-Bandwidth Memory (HBM), which are needed to work with the GPUs. The HBM controls are a chokepoint technology because there are only three companies that produce HBM, and none of them are in China. (Two are in South Korea and one is in the United States.)

**The biggest change in the December 2nd rules is that they added about 140 Chinese companies to the Entity List, which includes companies that make semiconductor manufacturing equipment (e.g., Naura,) and EDA companies (Empyrean) that make the software used to design ICs.** This completes the four-part policy objective I mentioned with respect to the policy for adding entities to the Entity List. In previous rules, Commerce added to the list the companies involved in advanced node integrated circuits, GPU and AI-related development, and supercomputer development. This rule adds to the list the companies in China that produce semiconductor production equipment.

Some critics saw the new rules as not very effective since their goal was not to cut off all inputs for making any semiconductors in China. **The Biden team, on the other hand, is careful to do two things that the Trump team might not be as careful about.** (But, again, we really do not know what the Trump administration's export control policy will be.)

**First, the Biden Administration has not wanted to affect the production of legacy node semiconductors so as not to create COVID era-like supply chain**

**shocks to the global system.** Thus, apparently for this reason, it did not list SMOC, SMTC, and other fabs that produce only legacy node chips. **Second, the Biden Administration wants to be respectful of the allies.** There were no extraterritorial controls imposed against exports of these tools from allied countries' companies or most of the A:5 countries<sup>1</sup> (other than Korea and India). BIS excluded, for example, exports to China from Japan, Germany, and the Netherlands from many of the controls, but they didn't exclude Korea or India.

This suggests to me that Japan and the Netherlands will be imposing their own controls at some point, but not Korea. That, I speculate, is why Japan and the Netherlands got special treatment. In terms of effectiveness, it will depend on how far the Japanese and the Dutch are willing to go. If they do not impose similar controls, the new rules will not be very effective over the long term.

Eventually, the core theme that I have been arguing is that multilateral controls are more effective. This doesn't mean that unilateral controls are illegal or should never be used. I'm only saying that a basic rule of all technology development is that, over time, multilateral (or plurilateral) controls are always more effective. How much time that is depends upon the technology at issue. Some types of items can immediately be produced by companies in allied countries or China that are subject to controls. Others will take many years or decades to create substitutes for what is no longer able to be controlled. The issue is not simple.

Historically, China has not responded much directly in retaliation. This time, their response was to cut off the supply of critical minerals. However, there are two more important things. First, **such threats of retaliation will have a bigger impact on countries like Taiwan, Japan, and Korea, who are all much more exposed to retaliation than the United States.** There might be forces within these countries that may be reluctant to align with the US for fear of critical mineral dependence unless the US can arrange for better supply chain security. Second, no matter the leadership style, the US Government's objective is for US and allied companies to

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<sup>1</sup> About "A:5 countries": The Bureau of Industry and Security (BIS) classifies countries into groups based on diplomatic ties and security considerations. Group A:5 includes 37 nations that are members of the multilateral export control regimes and in good standing. These countries receive favorable treatment under the Export Administration Regulations (EAR), benefiting from streamlined licensing requirements and simplified export controls to ensure secure and lawful international trade. A:5 is one of the lists of countries in Group A.

decrease their dependency on China – as a market and as a source of raw material or other inputs.

The Biden team has been pretty aggressive with US companies to achieve this broader national security objective – i.e., that such dependencies on China will not only eventually harm themselves but also the US industrial base. For example, in the new rules, there are temporary general licenses, extended by one year for production, development, packaging, repair, and other activities using Chinese companies to make components for semiconductor manufacturing equipment for end uses outside of China. The Biden team aims to give US companies one more year to wean from dependency on China. When the Trump team starts, this will further justify them to find alternative suppliers. But, if China keeps imposing its own controls in retaliation to US controls, it will do more to accelerate decoupling than the Commerce Department and US export controls ever will.

**DSET:** In your testimony on Capitol Hill, you emphasized the importance of establishing the multilateral export control regime. Also, in a previous interview, you mentioned that Taiwan might be better off relying on the US extraterritorial controls. However, there seem to be Taiwanese companies helping Huawei in building its chipmaking capabilities. How should the US achieve the multilateral export control goal effectively? How should Taiwan strengthen its export control regulations?

**Kevin:** I have been an advocate for a regime of a smaller group of allies to address both (i) traditional proliferation-related issues that cannot be addressed by the legacy regimes because of Russia's membership in the regimes and (ii) the non-traditional common security and human rights issues that are not within the mandates of the legacy four regimes. In particular, the four legacy regimes are country-agnostic and are not designed to address non-traditional national security concerns, particularly those specific to China and Russia. Also, to address non-traditional national security issues in emerging technologies, the focus of a new regime cannot be only those types of items that have a direct relationship to weapons. In addition, a new regime needs to focus on common human rights issues, particularly with respect to mass surveillance.

**We need a new regime of a smaller group of allies that are producers of those technologies – and that are also willing to impose end-use and end-user**

**controls, as item-based controls will not be effective. That is, there are three types of export controls – those based on an item’s technical parameters (“item-based” controls), those based on how unlisted items could be used (“end-use” controls), and those based on specific entities, regardless of the item and its end use (“end-user” controls). All three need to work together for an effective system. Now, however, the legal authority of the allies to impose end-use and end-user controls is limited to situations involving the development or production of weapons of mass destruction. In my view, all allies should have significantly broader legal authorities to impose controls on (i) items that are not identified in the multilateral regime lists; (ii) end uses, even if not related to WMD; and (iii) end users that are supporting activities contrary to broader common security interests, particularly in China and Russia.**

**One reason I think the allies have resisted changing their laws to give themselves such authorities is that they don’t want to create the perception of ganging up on China.** They want to stick to the Wassenaar arrangement and maintain the same image from the past of regulating technology of concern. We can do the informally named “Wassenaar-Minus-One” approach because of Russia, but they do not want to take actions that are specific to China. In proposing my new plurilateral regime ideas, I undervalued the anxieties of the allies on this issue. This is why they have preferred the the cover of the Wassenaar process, even if it is far less effective

This leads to the second reason, which is the disagreement within the agencies on whether the approach is. Some in the US and allied country governments believe that my ideas would never work because the allies were not going to accept the idea of a formal new regime. My approach would have been to find a way to address the allies’ concerns. There is also the issue of manpower. The export control and related agencies – in the US and in the allied countries – are already thinly staffed, and they have to deal with regular things plus the time-consuming Russia-specific controls. The fourth related issue is that other than me and a few think tank commentators, there was not really any coherent vision of the idea of a new regime being articulated.

What has evolved in the last few years is four ad hoc plurilateral regimes, which is somewhat chaotic. First, there is the informally named “Wassenaar Minus One,” group which is the core group of Wassenaar members that have agreed to unilaterally impose controls over what would have normally been agreed to at Wassenaar in previous years. Second, there is the AUKUS arrangement, which is more straightforward. Third, there is a group of 38 countries, including Taiwan, imposing controls against Russia. Lastly, there are the Japanese, Dutch, and US control over semiconductor production equipment that are not controlled by the regimes. We are going to be limping along these four ad hoc regimes for slightly different objectives unless, though unlikely, some allies can get behind the Trump Administration to create a new regime founded on a common, coherent vision of common, contemporary national security issues to the allies.

**The issue with Taiwan is that there are always some countries’ laws that would not permit them to participate in an organization where Taiwan is a member.**

This goes back to the earlier reason for China's retaliation and the fear of provoking China. To answer your question, in my personal view, Taiwan must absolutely be included because this is where advanced node semiconductors are produced. TSMC, MediaTek, and all the core technology companies and experts in Taiwan should have a seat at this very important table given that so many of the emerging technology items at issue in the discussion are produced in Taiwan.

There are ways to reflect Taiwan’s interests without violating the allies’ limitations involving Taiwan. One would be sort of the IPEF model, such as having different meetings with multiple countries and bilateral meetings with Taiwan. This could work to address both concerns of Taiwan’s inputs and being respectful of the legal and diplomatic impediments of Japan, Korea, and the other allies with similar limitations.