The Abundance Institute

Public Interest Comments on Establishment of Reporting Requirements for the Development of Advanced Artificial Intelligence Models and Computing Clusters

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The Abundance Institute as a mission-driven nonprofit focused on creating space for emerging technologies to grow, thrive, and reach their full potential. This comment is designed to assist the agency as it explores these issues. The views expressed in this comment are those of the author(s) and do not necessarily reflect the views of the Abundance Institute.

I. Introduction

We appreciate the opportunity to respond to the Bureau of Industry and Security's ("BIS") request for comment ("RFC") on a proposed rule amending its Industrial Base Surveys rules to regulate certain machine learning models and computing clusters.[1] BIS is undertaking this effort to comply with Section 4.2(a)(i) of the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence ("EO").[2]

The EO claims authority to impose these requirements under the Defense Production Act ("DPA").[3] However, the EO cannot bypass Congress and impose new regulations on private entities based solely on a cursory reference to the DPA. Furthermore, BIS lacks the authority under the DPA to compel companies to self-identify. The DPA also does not authorize the type of ongoing regulations proposed in the RFC, which attempt to circumvent essential statutes like the Paperwork Reduction Act. Lastly, using the DPA to create a survey-specific rule is unprecedented and has neither been analyzed nor defended in the RFC.

For these reasons, BIS should reject the proposed rule as both unauthorized and unnecessary. The EO directives lack authorization under the DPA. Nevertheless, if BIS chooses to implement the EO directives, it should do so through its standard procedures.

II. The Proposed Rule is Inconsistent with the DPA and with Existing BIS Rules

The EO directs the Secretary of Commerce to impose reporting requirements on certain AI developers and providers of computation.[4] It claims authority to do so from the DPA.[5]

Title VII of the DPA indeed provides, as support for the other portions of the Act, authority to the President to gather information from private industries. Executive Order 13603 delegates this authority to the Secretary of Commerce, and the authority historically has been deployed by the

[1] Department of Commerce, Bureau of Industry and Security, Establishment of Reporting Requirements for the Development of Advanced Artificial Intelligence Models and Computing Clusters, 89 FR 73612 (Sept. 11, 2024) ("RFC").

[2] Executive Order 14110 (Oct. 30, 2023), https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/ ("EO").

[3] EO §4.2(a)(1).

[4] *Id.*

[5] *Id.*

Department of Commerce's Bureau of Industry and Security to perform "industrial base assessments."[6]

But the DPA does not authorize the EO's actions or BIS's proposed rule. Indeed, as 20 state attorneys general have noted, "[t]ypical usage of the Defense Production Act also bears no resemblance" to the EO's reporting requirements.[7] They note that even when the DPA has been used to spur the production of non-defense related items, such as solar panel parts, at least it was driving *production*. Yet "[h]ere, the Biden administration invokes the DPA not to encourage production or distribution of anything, but instead to give the Department of Commerce a new supervisory role as the gatekeeper of emerging technology. … If anything, these additional regulatory requirements and their associated costs and risks will lead to a decrease in the production of AI."[8] As I have written elsewhere, "The primary products being 'produced' by this use of the Defense Production Act will be reams of filings to the Federal Government and a legal precedent for unilateral Presidential regulation of the economy."[9]

Such use of the DPA lacks a limiting principle. Interpreting the DPA to allow the imposition of these reporting requirements "would allow the executive branch to invoke the DPA to supervise any industry and impose whatever requirements it deems fit. That position has no support in the text of the DPA or its historical use."[10] This interpretation is also unconstitutional:

> "The DPA is not a shortcut around the U.S. Constitution. The Constitution assigns the power to make the laws to Congress, not to the Executive branch. Indeed, Congress is actively considering a swath of artificial intelligence-related bills. If Congress chooses to act deliberately on a specific issue, the President cannot therefore usurp that decision by stepping in and regulating, with merely a general reference to the DPA."[11]

Further highlighting the conflict between the EO directives and DPA authority, three elements of BIS's proposed rule contradict both the DPA and BIS's own regulations: (1) the compelled self-identification of survey subjects, (2) the indefinite duration of the reporting requirements, and (3) the creation of a survey-specific rule. If BIS proceeds with the EO's unconstitutional demands, it should at least address these problematic aspects of the proposed rule.

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[6] *See* Congressional Research Service, *The Defense Production Act of 1950: History, Authorities, and Considerations for Congress*, at 8-9 and 13-14 (updated Oct. 6, 2023), https://crsreports.congress.gov/product/pdf/R/R43767 (hereafter, "CRS DPA Report").

[7] Letter from Utah Attorney General Sean Reyes *et al.* to Secretary of Commerce Gina Raimondo at 4 (Feb. 2, 2024), https://attorneygeneral.utah.gov/wp-content/uploads/2024/02/2024-02-02_Comment_response_letter_on_NIST_RFI_re_AI.pdf ("AG Letter").

[8] *Id.* at 5.

[9] Neil Chilson, Testimony Before the House Subcommittee on Cybersecurity, Information Technology, and Government Innovation, *White House Overreach on AI* at 4 (Mar. 21, 2024), https://oversight.house.gov/wp-content/uploads/2024/03/Chilson-Testimony.pdf ("Chilson Testimony").

[10] AG Letter at 4.

[11] Chilson Testimony at 5 (citations omitted).

A. The proposed rule improperly and unnecessarily requires survey subjects to self-identify.

Section 705 of the DPA "entitle[s]" the President to gather "by regulation, subpoena, or otherwise obtain such information from … any person as may be necessary or appropriate, in his discretion, to the enforcement or the administration of this Act [the DPA]."[12] The DPA contemplates that the President or his delegates will identify the targets of information gathering. It does not entitle the President to be provided with information absent a specific directed request.

And yet, the new rule requires private entities to self-identify themselves as "covered persons" and subsequently file a notification with BIS:

> "Covered U.S. persons are required to submit a notification to the Department by emailing ai_reporting@bis.doc.gov on a quarterly basis as defined in paragraph (a)(2) of this section if the covered U.S. person engages in, or plans, within six months, to engage in 'applicable activities,' …"[13]

This self-identification requirement is incompatible with the purpose and legal authority provided under the DPA, for four reasons.

First, the proposed rule fails to meet the DPA's requirement that the "scope and purpose" of any information collection must be "defined" because the proposed rule does not identify specific survey subjects.[14] The proposed rule sets certain technical thresholds above which BIS demands that all developers and compute providers identify themselves. Yet specifying who will receive a survey is BIS's responsibility, and an essential part of defining the scope of a collection. If BIS itself cannot identify the relevant subjects for its surveys, the scope and purpose of the survey is not "defined." A failure to identify the relevant subjects also makes it impossible for BIS to meet the DPA's requirement that it "assure[] that no adequate and authoritative data are available from any Federal or other responsible agency."[15] If BIS cannot identify the parties to be surveyed, how can it be sure that information has not already been gathered by another agency? The RFC does not resolve or even discuss this problem.

Second, BIS's own implementing rules and enforcement specifically contemplate that BIS will identify persons whom it wishes to survey. BIS documents and rules repeatedly

[12] 50 U.S.C. § 4555(a); Section 705(a) of the DPA.

[13] RFC, 89 FR at 73616 (proposed §702.7(a)).

[14] 50 U.S.C. §4555(a); Section 705(a) of the DPA.

[15] *Id.*

contemplate that "BIS … ***selects*** the persons to be surveyed."[16] And "[e]ntities ***are selected for participation*** based on their role in, or relationship to, the industry sector or technology being assessed."[17]

The enforcement scheme further demonstrates that BIS bears the burden of targeting parties. Under 15 CFR §702.4 and §702.5, "[e]very person who ***receives*** a survey or other request for information" faces potential civil and criminal penalties if they fail to "completely and adequately" respond to surveys, unless exempted by BIS.[18] By contrast, there is no statutory or regulatory authority to penalize a party for failing to notify BIS that one might fall within the scope of a particular survey.

Third, under BIS's own reasoning, the self-identification requirement is unnecessary. As the RFC notes, BIS has already issued an assessment to the parties it believes hold the key information about the development of advanced artificial intelligence models.[19] Those parties were "identified as likely to meet the technical thresholds for participation in this collection … by BIS staff through a combination of market research and conversations with industry."[20] BIS could use that identical process to issue future surveys of the AI and computing cluster industries. Assuming for the sake of argument that the RFC's Regulatory Flexibility Act ("RFA") analysis is correct, identifying the relevant survey subjects is also practically feasible. After all, "BIS assesses that there are between zero and 15 companies" subject to the surveys, and BIS knows them well enough to declare that "[a]ll of these entities are well-resourced technology companies."[21]

Finally, BIS releasing itself from the responsibility to identify survey targets is inconsistent with the purpose of the DPA, which is to ensure U.S. industrial production is sufficient for government-related, national defense and emergency recovery purposes. If the federal government cannot even identify a company, it is difficult to understand how that company is essential to the federal missions the DPA is intended to facilitate.

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[16] Notice of Final Rule, Dept. of Comm., Bureau of Information and Security, 80 FR 41427 (emphasis added) (creating 15 CFR §702).

[17] *Id.* at 41430 (emphasis added).

[18] 15 CFR §702.4 and §702.5.

[19] RFC, 89 FR at 73614. ("BIS collected information responsive to the requirements of section 4.2(a) of E.O. 14110 via a mandatory survey of companies identified as developing or planning to develop potential dual-use foundation models. That survey was issued on January 26, 2024.").

[20] OMB PRA Package AI Project Summary, "Frontier AI Assessment Overview," https://www.reginfo.gov/public/do/DownloadDocument?objectID=139155801.

[21] RFC, 89 FR at 73616.

B. The proposed rule imposes ongoing reporting rather than a one-time survey.

The ongoing nature of the proposed rule is inconsistent with DPA authority and past usage of DPA authority. The proposed rules establish a perpetual quarterly reporting requirement on an unspecified and unidentified group of existing and future entities.[22] BIS has not identified any other §702 survey with a perpetual term; indeed, we believe there are none. As the supplement to the existing §702 rules explains, "Surveys **are one-time exercises** used to assess the state and/or capabilities of a particular industry sector or technology."[23]

Even when BIS has surveyed a single industry multiple times, it does so with one-time requests. See, for example, BIS's Office of Technology Evaluation's supporting statement for its U.S. Microelectronics Industry survey, which explains that "OTE intends to survey approximately 1,000 organizations" with "a one-time only request" and that "OTE has conducted nearly 100 surveys and assessments of this kind in the past 30 years."[24] Of particular relevance, the already-conducted Frontier AI Assessment, done under the same EO directive as this proposed rule, was a one-time collection.[25]

Using the DPA in this manner is also an end-run around OMB review, the Paperwork Reduction Act, and the Regulatory Flexibility Act. On current technical trajectories, the category of "covered persons" could grow rapidly and could include small- and medium-sized businesses. As experts at venture capital firm Andreessen Horwitz note in a long and detailed analysis of the cost of compute for startups, "Training top-of-the-line models remains expensive, but within reach of a well-funded start-up."[26] As per-FLOP costs of AI compute continue to decline rapidly,[27] companies with few employees and little revenue – start-ups – could, in the very near term, regularly train models that cross the 10^26 FLOPs threshold.

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[22] RFC, 89 FR at 73616 (proposed rule §702.7(a)(2)).

[23] Final Rule Notice, 80 FR at 41430 (emphasis added).

[24] SUPPORTING STATEMENT, U.S. Department of Commerce Bureau of Industry and Security Defense Industrial Base Assessment: The U.S. Microelectronics Industry OMB Control No. 0694-0119, https://www.reginfo.gov/public/do/DownloadDocument?objectID=125467201.

[25] PAPERWORK REDUCTION ACT SUBMISSION, Form 83-i, Defense Industrial Base Assessment: Frontier AI Assessment, https://www.reginfo.gov/public/do/DownloadDocument?objectID=139155901.

[26] Guido Appenzeller, Matt Bornstein, and Martin Casado, *Navigating the High Cost of AI Compute* (Apr. 27, 2023), https://a16z.com/navigating-the-high-cost-of-ai-compute/.

[27] Marius Hobbhahn and Tamay Besiroglu, *Trends in GPU Price-Performance* (2022). https://epochai.org/blog/trends-in-gpu-price-performance. This study approximates the cost of compute for top processing units and found that the number of FLOP/second per dollar doubles every ~2.95 years for top GPUs. Therefore, as of 2022, the per-FLOP cost of top GPUs was halving every 2.95 years. Other research finds that holding performance the same, cost halves every 2.1 to 2.5 years. *See*, Epoch.ai, *Trends in Machine Learning Hardware: Computational Price-Performance* (visited Oct. 10, 2024), https://epochai.org/blog/trends-in-machine-learning-hardware#computational-price-performance.

BIS must account for the fact that the proposed rule could easily apply to future AI start-ups. This potential growth calls into question BIS's use of the umbrella information collection (OMB Control Number 0694-0199) for a quarterly filing that could be applied to hundreds of companies in the relatively near future. It also suggests that the RFC's assumption that training top-of-the-line models is only done by companies with many employees and substantial revenue – *i.e.*, large companies is incorrect.

That BIS might change the rule in the future cannot excuse it from analyzing the proposed rule's impacts today. The RFC notes that "[a]s AI technology development and implementation are expected to advance over the next few years, the number of covered U.S. persons involved in it will also increase" and anticipates that "the Secretary will update the technical conditions that trigger the reporting requirements over time," changing the "number of additional impacted entities over time."[28] This again demonstrates that the proposed rule does not meet the DPA's requirement of a defined scope. But it also shows that the RFC's assessment of the proposed rule on small entities is at best incomplete.

C. BIS has never adopted a rule to issue a survey.

While the Department of Commerce has "[s]ince the mid 1980s … required survey responses based on the statute," never has it adopted a survey-specific rule.[29]

The proposed rule would change that. 15 CFR §702, adopted in 2015, contains the rules implementing the DPA's industrial base surveys and other data collections.[30] Its existing provisions are statutorily required by the DPA, and as such apply to all industrial base assessment surveys.[31] To implement the information collection requirements of the EO, however, the RFC proposes to add a new subsection to §702. While the other provisions of §702 are required by the DPA and apply to all surveys issued by BIS, the new rules do not implement any provision of the DPA and govern only the AI model and compute capability surveys directed by the EO. This step, unprecedented in the 70+ year history of the DPA, again demonstrates the incompatibility of the EO's demands with the DPA's intended design.

[28] RFC, 89 FR at 73617. It is unclear why the RFC assumes that FLOP and compute thresholds will only be raised, rather than lowered; the EO offers very few constraints on the "set of technical conditions for models and computing clusters that would be subject to the reporting requirements of subsection 4.2(a) of this section." EO §4.2(b).

[29] Final Rule Notice, 80 FR at 41430.

[30] Final Rule Notice, 80 FR at 41426.

[31] CRS DPA Report at 15.

III. Conclusion

Because Section 4.2 of the EO exceeds DPA authority, the proposed rule is unauthorized. It is also contrary to existing BIS rules. BIS should not adopt it.

However, if BIS does pursue reporting requirements it should do so by periodically issuing one-time surveys through the normal survey process, to parties identified by BIS. At a minimum, BIS must offer a full-fledged legal justification for how the proposed rule complies with the DPA and the existing BIS rules, and further detail how the rule complies with the PRA and RFA.