



PRIMER

The Defense Production Act: A green industrial statute-in-waiting

Environment
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I. Summary

This memo offers a primer on invoking the Defense Production Act (“DPA”) to support the clean energy transition. It covers the statute’s history and purpose, its major authorities, and some of the potential obstacles to DPA action.

The memo concludes with a specific proposal: upgrading existing transmission line capacity by using the DPA to install so-called “grid enhancing technologies.”

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II. History and purpose

The Defense Production Act of 1950 (“DPA”) was originally enacted at the beginning of the Korean War to grant the executive branch wide-ranging authority to marshal private industry to promote the national defense.¹ Despite the DPA’s continued association in the popular press with national security, a pair of late-twentieth century amendments transformed the DPA into a green industrial statute-in-waiting.² The current statute emphasizes that “the availability of domestic energy supplies for national defense needs” is central to national defense preparedness.³ In particular, the law envisions that the president would use the DPA to attain domestic energy security by relying, “to the maximum extent possible . . . on renewable energy sources (including solar, geothermal, wind, and biomass sources), more efficient energy storage and distribution technologies, and energy conservation measures.”⁴

More generally, Congress recognized that “the industrial capacity that is relied upon by the United States Government for military production and other national defense purposes is deeply and directly influenced by the overall competitiveness of the industrial economy of the United States.”⁵

As a result, the statute defines “national defense,” its key term, as:

“programs for military and **energy production or construction**, military or **critical infrastructure assistance to any foreign nation**, homeland security, stockpiling, space, and **any directly related activity**. Such term includes emergency preparedness activities conducted pursuant to title VI of The Robert T. Stafford Disaster Relief and Emergency Assistance Act [42 U.S.C. 5195 et seq.] and **critical infrastructure protection and restoration**.”⁶

In amending the DPA, Congress wisely acknowledged that investments in domestic energy, particularly renewable energy and energy conservation, and investments in domestic research, innovation, and manufacturing are key strategic goals for ensuring America’s national security. Importantly, the government does not need to declare a national emergency to unlock most of the DPA’s potential for enabling strategic, long-term investments in energy security.⁷

III. DPA authorities

Broadly, the DPA confers three main types of powers on the federal government:

- The DPA gives the government tools to ensure that scarce resources and materials are allocated first to critical nationwide needs (Title I);

¹ Pub. L. 81-774, 64 Stat. 798 (1950). *See also* Cong. Rsch. Serv., R43767, *The Defense Production Act of 1950: History, Authorities, and Considerations for Congress*, Updated March 2020 (“CRS Overview”) 1, 2, *available at*: <https://sgp.fas.org/crs/natsec/R43767.pdf>.

² *See* Pub. L. 96-294, §102, 94 Stat. 611 (1980); Pub. L. 102-558, 106 Stat. 4198 (1992).

³ 50 U.S.C. § 4502(a)(5)

⁴ *Id.* § 4502(a)(6).

⁵ *Id.* § 4507(a)(7).

⁶ *Id.* § 4552(12) (emphasis added).

⁷ Although, the DPA does confer some additional flexibility during a national emergency.

- The DPA gives the government authority to make investments to protect and expand the nation’s productive capacity to maintain national defense preparedness (Title III);
- The DPA provides a grab bag of legal authorities largely designed to clarify the relationships between the DPA and other existing legal regimes (such as antitrust and administrative law) (Title VII).

While the DPA as originally passed included other far-reaching authorities, like wage and price controls, those powers have since been removed from the statute, leaving only Titles I, III and VII intact,⁸ covered below.

(1) Priority procurement – Title I

Title I of the DPA empowers the government to undertake procurement contracts that require acceptance and performance of such contracts, to re-order the priority of private contracts, and to allocate materials, services, and facilities to the extent the President deems “necessary or appropriate to promote the national defense.”⁹ Some examples of the use of this authority include:

- The federal government used Title I of the DPA extensively to obtain cleaning supplies, telework equipment, IT healthcare equipment, and vaccine production and construction equipment necessary for the COVID-19 response and Operation Warp Speed.¹⁰ This included placing a variety of “rated orders”¹¹ for materials such as N95 face masks and hospital ventilators.¹²
- DOD “routinely” uses Title I’s prioritization authority to prioritize contracts relating to the development and procurement of defense systems;¹³ DOD estimates that it places approximately 300,000 separate orders each year using this authority.¹⁴

Importantly, priority orders under this authority travel down the supply chain.¹⁵ A manufacturer who received a rated order for heat pumps, for example, would have to subsequently issue rated orders for all component parts and materials to its suppliers and subcontractors.

(2) General distribution – Title I

Title I allows the President to take the extraordinary step of controlling “the general distribution of any material in the civilian market”—i.e., allocating the economy-wide distribution of a particular material—but only if the President finds that that material “is a scarce and critical material essential to the national defense,” and that

⁸ See CRS Overview at 2 (explaining that the other four titles of the DPA, “related to requisitioning, rationing, wage and price fixing, labor disputes, and credit controls and regulation were terminated in 1953 when Congress allowed them to lapse.”).

⁹ 50 U.S.C. § 4511(a).

¹⁰ See FEMA, *The Defense Production Act Committee Report to Congress* 11 (Sept. 20, 2021) (“2020 DPA Committee Report”) available at https://www.fema.gov/sites/default/files/documents/fema_DPAC-report-Defense-production-act-committee_2020.pdf.

¹¹ “Rated orders” are procurement contracts issued by the government pursuant to DPA authority that requires receiving companies to give the government’s order priority over all others as needed to meet the order’s deadline.

¹² *Id.* at 13-14; see also FEMA, *Federal Priorities and Allocations System (FPAS)*, available at <https://www.fema.gov/disaster/defense-production-act/federal-priorities-and-allocations-system>.

¹³ See CRS Overview at 8-9.

¹⁴ See 2020 DPA Committee Report at 10.

¹⁵ See 10 C.F.R. 217.35; 15 C.F.R. 700.15.

“the requirements of the national defense for such material cannot otherwise be met without creating a significant dislocation of the normal distribution of such material in the civilian market to such a degree as to create appreciable hardship.”¹⁶ Note that “energy” is considered a “strategic and critical material” for the purposes of Title I,¹⁷ although the President is prohibited from using the DPA to undertake mandatory rationing or allocation of gasoline or energy without authorization from Congress.¹⁸

While this authority is scarcely invoked, the federal government in spring 2020 designated various personal protective equipment, including N95 masks and other respirators, as “scarce or threatened materials” subject to the DPA’s allocation authority,¹⁹ and used that authority to, for example, prohibit a shipment of N95 masks abroad and instead distribute them to New York and New Jersey.²⁰

(3) Energy procurement and allocation – Title I

Title I contains specific provisions related to the energy sector, authorizing the President to allocate materials, equipment, and services or prioritize contracts or orders to “maximize domestic energy supplies” so long as the President finds that the materials, services, and facilities are “scarce, critical, and essential” to either “maintain or expand exploration, production, refining, transportation,” to “conserve energy supplies,” or “to construct or maintain energy facilities,” and finds that those goals “cannot reasonably be accomplished without exercising” this authority.²¹

This authority was deployed during the California gas crisis of 2001, when natural gas suppliers stopped supplying gas to Pacific Gas & Electric out of fears about PG&E’s creditworthiness.²² This supply cutoff caused rolling blackouts throughout the state with an imminent risk of catastrophic power losses that could last weeks or months.²³ The Clinton administration exercised Title I authority to force suppliers to continue to sell to PG&E and avert catastrophic power outages.²⁴

(4) Direct financial support – Title III

Title III gives the government the authority to purchase (or make commitments to purchase) industrial resources, materials, or critical technology items for Government use or resale; encourage exploration, develop, and mining of critical and strategic materials; develop production capabilities (e.g., via grants or cost-sharing agreements); and increase use of emerging technologies for security applications, and faster transition between

¹⁶ 50 U.S.C. § 4511(b).

¹⁷ *Id.* § 4516.

¹⁸ *Id.* § 4515, 4516.

¹⁹ See Memorandum on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use, White House (Apr. 3, 2020), available at <https://trumpwhitehouse.archives.gov/presidential-actions/memorandum-allocating-certain-scarce-threatened-health-medical-resources-domestic-use/>.

²⁰ See 2020 DPA Committee Report at 17.

²¹ 50 U.S.C. § 4511(c).

²² Frank R. Lindh, *Keeping California’s Pilot Lights Burning: A Rare Exercise of Presidential Powers*, 16 Nat. Res. & Env’t 320, 320 (Summer 2001).

²³ Frank R. Lindh, *Keeping California’s Pilot Lights Burning: A Rare Exercise of Presidential Powers*, 16 Nat. Res. & Env’t 320, 320 (Summer 2001).

²⁴ *Id.*; *The California Energy Crisis and Use of the Defense Production Act*, Hearing before the Sen. Comm. on Banking, Hous., and Urban Affs., S. Hrg. 107-215 64-65 (2001) (Memorandum for the Secretary of Energy on the Electric Energy Shortage in California, Jan. 19, 2001); *id.* at 62-63 (Temporary Emergency Natural Gas Purchase and Sale Order, Jan. 19, 2001).

government-sponsored research and development to commercial applications, and between commercial research and development to national defense applications.²⁵

In order to invoke this authority, the President must find that:

- The industrial resource, material, or critical technology item is essential to the national defense;
- Without direct financial support, domestic industry could not be reasonably expected to provide the resource, material, or item; and
- Direct financial support is the most cost effective, expedient, and practical alternative method for meeting the need.²⁶

Direct financial support must be taken to address an identified shortfall of industrial resources, critical technology items, or materials essential to the national defense; importantly, actions to address any shortfall that exceeds \$50 million may not be taken without Congressional authorization.²⁷

Both the findings required above and the \$50 million cap may be waived, either during a declared emergency by the President or Congress, or following a Presidential determination that an action is “necessary to avert an industrial resource or critical technology item shortfall that would severely impair national defense capability” can waive this \$50 million shortfall cap.²⁸ (See below, Section V.B, for more detail).

The direct support authority does not require that all expenditures be made pursuant to a specific appropriation from Congress. Therefore, an agency may be able to transfer funds from an existing appropriation to make expenditures for projects pursuant to Title III’s direct support authority. (More on this below).

Direct support authority is regularly used by DOD for investments in the domestic industrial base, and was utilized to address COVID-19 response and recovery; at the end of FY2020, 87 projects existed in the government’s portfolio of Title III projects.²⁹ Some examples include providing \$1.5 million to a provider of Naval repair services to purchase equipment that would improve its performance (and allow it to retain its workforce during the COVID-19 crisis),³⁰ providing \$1.3 million to a manufacturer of fabric for U.S. military uniforms to expand their production capacity,³¹ and providing \$6 million to a manufacturer of solar panels and panel cells to expand production capacity for use in the space program.³²

²⁵ 50 U.S.C. § 4533(a)(1).

²⁶ *Id.* § 4533(a)(5).

²⁷ *Id.* § 4533(a)(6)(C).

²⁸ *Id.* § 4533(a)(7).

²⁹ *Fiscal Year 2020 Industrial Capabilities Report to Congress*, Department of Defense 1, 142-43 (Jan. 2021).

³⁰ Dep’t of Defense, “DOD Announces \$74.9 Million in Defense Production Act Title III COVID-19 Actions,” (Dec. 4, 2020),

<https://www.defense.gov/News/Releases/Release/Article/2435891/dod-announces-749-million-in-defense-production-act-title-iii-covid-19-actions/>.

³¹ Dep’t of Defense, “DoD Announces \$1.3 Million Defense Production Act Title III Agreement With Brittany Global Technologies to Strengthen the Domestic Clothing and Textile Industrial Base,” (Jan. 28, 2022),

<https://www.defense.gov/News/Releases/Release/Article/2916346/dod-announces-13-million-defense-production-act-title-iii-agreement-with-britta/>.

³² Dep’t of Defense, “DOD Announces Two Defense Production Act Title 3 COVID-19 Projects to Support the Space Defense Industrial Base: \$12.45 Million Investment to Improve Domestic Semiconductor Production and \$6 Million to Expand Domestic Production of Satellite Solar Array Panels,” (May 29, 2022),

<https://www.defense.gov/News/Releases/Release/Article/2201915/dod-announces-two-defense-production-act-title-3-covid-19-projects-to-support-t/>.

Direct subsidy payments for raw or non-processed material

Title III contains a specific provision for allowing direct subsidy payments for non-agricultural, *domestically* produced “raw or nonprocessed material” if the President finds that: (1) under “fair and equitable ceiling prices,” without such action, a decrease in supplies from high-costs sources of these materials will ensue, which would frustrate the purposes of the statute; or (2) that there is a temporary increase in the cost of transporting these materials to market.³³ However, the existence of this provision does not seem to preclude the government using subsidies or grants for the purposes outlined in 50 U.S.C. § 4533(a)(1).

(5) Direct equipment installation – Title III

Where the President “determines that such action will aid the national defense,”³⁴ Title III allows the government to “procure and install equipment, facilities, processes, or improvements to plants, factories, and other industrial facilities” owned by the federal government or private companies,³⁵ and to transfer or sell equipment owned by the federal government and installed at a plant, factory, or facility to private owners of such facilities.³⁶ It also allows the federal government to “provide for the modification or expansion of privately owned facilities, including the modification or improvement of production processes, when taking actions under” Title III’s loan authorities.³⁷

(6) Loans and loan guarantees – Title III

Title III allows the federal government to issue loans to private entities or guarantee loans made to such entities to “reduce current or projected shortfalls of industrial resources, critical technology items, or materials essential for the national defense” via investments in the entities’ production or productive capacity.³⁸ While the two powers differ slightly in their emphasis,³⁹ they are described together here given their very similar scope and limitations, as well as the fact that prior to the COVID-19 response they had largely fallen out of favor and not been used for decades.⁴⁰

The primary reason that loans and loan guarantees had fallen out of favor for many decades is that the DPA requires that for loans and loan guarantees, unlike for direct financial support, these actions may only be taken to the extent that an appropriations act has (1) already provided budget authority for them in advance, and (2) included a limitation on the total loan principal available to be loaned or guaranteed.⁴¹ This second requirement is particularly restrictive; it makes tapping existing appropriations in an agency’s budget difficult, since most

³³ 50 U.S.C. § 4533(c).

³⁴ 50 U.S.C. § 4533(e)(A).

³⁵ *Id.* § 4533(e)(1)(A)-(B).

³⁶ *Id.* § 4533(e)(1)(D).

³⁷ *Id.* § 4533(e)(1)(C).

³⁸ 50 U.S.C. § 4531(a)(1), 4532(a).

³⁹ *Compare, e.g., id.* § 4531(a)(1) (authorizing loan guarantees for “any contractor, subcontractor, provider of critical infrastructure, or other person in support of production capabilities or supplies that are deemed by the guaranteeing agency to be necessary to create, maintain, expedite, expand, protect, or restore production and deliveries or services essential to the national defense;”) *with id.* § 4532(a) (authorizing loans “for the creation, maintenance, expansion, protection, or restoration of capacity, the development of technological processes, or the production of essential materials, including the exploration, development, and mining of strategic and critical metals and minerals.”).

⁴⁰ *See, e.g.,* CRS Overview at 14 (“the federal government has not used the loan [or loan guarantee] authorities . . . of Title III in more than 30 years.”).

⁴¹ 50 U.S.C. § 4531(a)(3); 4532(c)(1).

appropriation lines do not include specifications about loan principals. These limitations do not apply to the direct financial support provisions in the preceding section, which is likely why direct financial support is the dominant form of DPA spending under Title III.

In the event appropriate funding and principal authority can be located, loans may be authorized if the President makes findings similar to those required of direct financial support, above (i.e., the items are critical to the national defense, domestic industry cannot provide them without support, and loans are the best method for addressing the need), as well as finding that the prospective value of the loan and return provide a “reasonable assurance of repayment” and that the loan’s interest rate is reasonable.⁴² Additionally, a loan may not be guaranteed if any portion of the loan agreement may be amended or waived without the consent of the federal government.⁴³ And loans may only be guaranteed after the loan applicant has assured repayment and provided a security to the government.⁴⁴

As with direct financial support, loans and guarantees must be made to address a particular industrial shortfall essential to the national defense; where that shortfall exceeds \$50 million, loans and guarantees may not be made without first notifying Congress and waiting 30 days (although, importantly, unlike for direct financial support, this requirement is merely for notification rather than authorization).⁴⁵

Similar to direct financial support, these prerequisites for exercising loan or loan guarantee authority may be waived during a national emergency declared by Congress or the President,⁴⁶ although the other loan-specific requirements — that loans be specifically appropriated for with limitations on loan principle (i.e., those that appear to constitute the primary hurdle to using loans and loan guarantees in practice) — are not waivable. While the government has attempted to resurrect the loan program in response to the COVID-19 crisis, implementation has been challenging; the President attempted to delegate management of a loan program to the International Development Finance Corporation, a young agency typically focused on international development; as of mid-October 2021, the DFC had not successfully made a single loan under the program.⁴⁷

(7) Other authorities

A few other authorities exist within the DPA that are less likely to be core components of a green energy program, but bear mentioning here for completeness:

- Title I authorizes the President to identify scarce critical materials and put in place rules to prevent hoarding and price-gouging for those materials.⁴⁸
- Title VII exempts DPA regulations from the notice-and-comment requirements of the APA, creating an alternate set of public participation requirements;⁴⁹ it creates an exemption from state and federal antitrust laws for businesses taking coordinated action under the DPA at the direction of the federal

⁴² *Id.* § 4531(a)(2), 4532(b).

⁴³ *Id.* § 4532(a)(2)(F).

⁴⁴ *Id.* § 4532(a)(2)(G).

⁴⁵ *Id.* § 4531(d)(1)(A); 4532(d)(1)

⁴⁶ *Id.* § 4531(a)(2); 4532(b)(2).

⁴⁷ *U.S. International Development Finance Corporation: Actions Needed to Improve Management of Defense Production Act Loan Program*, Government Accountability Office GAO-22-104511 1, 33 (Nov. 2021), available at <https://www.gao.gov/assets/gao-22-104511.pdf>.

⁴⁸ *Id.* § 4534.

⁴⁹ *Id.* § 4559.

government;⁵⁰ it allows the federal government to appoint officers to help run DPA programs;⁵¹ it creates an interagency committee (the Committee on Foreign Investment in the United States, or CFIUS) allowing the federal government to conduct a national security review of corporate mergers and acquisitions and block such transactions as needed;⁵² and it creates an interagency Defense Production Act Committee to coordinate DPA activities across the government and report on those activities to Congress.⁵³

IV. Potential hurdles

Funding

To a large extent, several DPA authorities turn on the question of available funding. In other words, undertaking DPA projects may not be purely a question of executive branch initiative.

In general, expenditures under the DPA require authorizing appropriations; while the statute creates the Defense Production Act Fund for use in DPA projects,⁵⁴ in practice it seems like this fund does not operate as a plentiful, free-floating source of funding to be spent on DPA projects at the executive branch's discretion. (It also appears to be administered by the Department of Defense, which may not be the proper agent for executing green industrial policy.) Rather, many expenditures under the DPA are made pursuant to appropriations from Congress.

While Congress could specifically appropriate new money going forward for green energy projects under the DPA,⁵⁵ in the absence of a new appropriation, the executive branch would need to identify already-appropriated money that could legally be used for projects under the DPA.

The DPA does not require that government funds be explicitly set aside for DPA use. However, the government can only spend appropriated funds in accordance with statutory terms and conditions. To use an overly simplistic hypothetical: funds appropriated to the Department of Energy to enhance domestic household energy efficiency would be a good candidate for funding heat pump-related activity through the DPA; funds appropriated to the Department of Energy to buy office supplies would not. To use the DPA for a specific purpose, then, the administration would need to find an appropriations account authorizing expenditures on a related use or type of program. (Perhaps in a recent omnibus appropriations bill, or maybe in the BIF, IRA or CARES packages).

Alternatively, under some circumstances, Congress appropriates funding to agencies that includes a grant of transfer authority to use funding for other projects. There is precedent for using transfer authority to fund DPA actions. Between FY2014-FY2016, for example, the Department of Energy transferred \$135 million to the DPA fund to support the construction of biofuels production facilities under a joint memorandum of agreement between DOD-Navy, DOE, and USDA.⁵⁶

⁵⁰ *Id.* § 4558(j).

⁵¹ *Id.* § 4560.

⁵² *Id.* § 4565-66.

⁵³ *Id.* § 4567.

⁵⁴ *Id.* § 4534.

⁵⁵ As it did in the Inflation Reduction Act. *See* H.R. 5376, Sec. 30001 (117th Congress).

⁵⁶ CRS Report at 13 n.80.

The specificity of appropriations language is idiosyncratic, and transfer authority is complex to track and follow. As a result, identifying specific sources of existing funding that could be used through the DPA will likely be a task for experts within the administration and the federal agencies, rather than a task for outside advocates. One small note—while the executive branch may be able to find funding for many of the types of programs the DPA envisions (like procurement, grants, subsidies, and equipment installation), loans and loan guarantees under the DPA face additional hurdles, given that the DPA mandates that loans and guarantees only be made pursuant to an appropriation that explicitly anticipates loans and guarantees and specifies maximum loan principal amounts.⁵⁷ As noted in the next section, these requirements were suspended in the CARES Act, but only until March 27, 2022.

Expenditure limitations

When it comes to Title III’s (non-loan) expenditure provisions—e.g., purchases, purchase agreements, grants, and subsidies—the DPA imposes a theoretical limit on unilateral executive action.

Title III expenditures taken to correct “an industrial resource shortfall” that, in aggregate, total more than \$50 million must normally receive specific congressional authorization.⁵⁸ To our knowledge, there is no existing guidance about what constitutes a “shortfall.”⁵⁹ But given the likely sums of money under consideration for some contexts, even creative definitions of “shortfall” are unlikely to prove sufficient.

However, the \$50 million expenditure cap can be lifted either by Congress or, under certain circumstances, by the President.

Congress

Congress could, per the terms of the Title III restrictions, specifically authorize expenditures for certain programs beyond the \$50 million cap. But a more elegant solution might be to simply revive DPA provisions included in the CARES Act.

For two years, thanks to provisions in the CARES Act, the \$50 million resource shortfall cap was suspended for DPA expenditures:

“(1) during the 2-year period beginning on the date of enactment of this Act, the requirements described in sections 303(a)(6)(C) and 304(e) of the Defense Production Act of 1950 (50 U.S.C. 4533(a)(6)(C), 4534(e)) shall not apply ...”⁶⁰

The CARES Act suspensions, however, expired on March 27, 2022.⁶¹ If Congress wishes to revive them, it could simply adopt the exact same language in new legislation (or even tweak the duration). Reviving the

⁵⁷ 50 U.S.C. § 4531(a)(3); 4532(c)(1).

⁵⁸ *Id.* § 4533(6)(C). Also as a default rule, the White House must notify Congress, and wait 30 days from the date of notification to take action. *See id.* § 4533(6)(B).

⁵⁹ For example, could expenditures on air-to-air and air-to-water heat pumps count as separate shortfalls, each of which is subject to a \$50 million cap? Or would they count toward the same shortfall?

⁶⁰ CARES Act, Sec. 4017. These provisions also waived strict requirements in the DPA’s loan provisions, which allowed the government to make loans (to respond to the COVID-19 crisis) for the first time in 30-plus years.

⁶¹ The subsequent CARES Act provision in Sec. 4017 waived congressional *notification* requirements, although these expired in 2021. Congress could waive those again, but the notification procedures are not an impediment to action in the same way the funding limits are. Subsection (2) reads: “during the 1-year period beginning on the date of enactment of this Act, the requirements described in sections 302(d)(1) and 303 (a)(6)(B) of the Defense Production Act of 1950 (50 U.S.C. 4532(d)(1), 4533(a)(6)(B)) shall not apply.”

CARES suspension would also allow the DPA’s loan/loan guarantee authorities to play a meaningful role in efforts to build out domestic renewable capacity.

President

In the absence of Congress suspending the \$50 million cap by statute, the President can invoke his own waiver authority to bypass that limitation. Indeed, last June, the Biden administration did just that for five categories of clean energy technology: solar, transformers and grid components, heat pumps, insulation, and electrolyzers.⁶² The DPA allows the President to make aggregate expenditures in excess of the cap without Congressional authorization if:

1. the President or Congress declare a national emergency; or
2. "upon a determination by the President, on a nondelegable basis, that action is necessary to avert an industrial resource or critical technology item shortfall that would severely impair national defense capability."⁶³

Importantly, national defense here takes on its statutory definition, which includes various energy-related uses.⁶⁴ Historically, the president’s public justifications for invoking this waiver authority are minimal, perhaps because the risks from judicial review appear low.⁶⁵

Judicial review

This memorandum does not provide a comprehensive account of the litigation risk associated with action under the DPA, but rather a high-level overview of some relevant legal considerations.

The scope of the government’s powers under the DPA has not been directly or authoritatively tackled by the courts in many decades, and the courts have never weighed in on the boundaries of many various requirements of the DPA, such as those that:

- Items procured under Title I be “necessary or appropriate to promote the national defense;”⁶⁶
- Materials procured to ensure domestic energy supply under Title I must be “scarce, critical, and essential,” and the goals of the DPA “cannot reasonably be accomplished without” exercising Title I authorities;⁶⁷
- Materials purchased by the government under Title III “cannot reasonably be expected” to be provided by private industry without exercising Title III authorities;⁶⁸

⁶² Dep’t of Energy, “President Biden Invokes Defense Production Act to Accelerate Domestic Manufacturing of Clean Energy,” (June 6, 2022), <https://www.energy.gov/articles/president-biden-invokes-defense-production-act-accelerate-domestic-manufacturing-clean>.

⁶³ 50 U.S.C. §4533(7).

⁶⁴ *Id.* § 4552(12)

⁶⁵ *See, e.g.*, “Presidential Determination Pursuant to Section 303 of the Defense Production Act of 1950, as Amended,” Presidential Determination No. 2022-08, (Dec. 21, 2020) <https://www.federalregister.gov/documents/2021/12/27/2021-28285/presidential-determination-pursuant-to-section-303-of-the-defense-production-act-of-1950-as-amended>.

⁶⁶ 50 U.S.C. § 4511(a).

⁶⁷ *Id.* § 4511(c).

⁶⁸ *Id.* § 4533(c)

- Equipment installed in production facilities under Title III “will aid the national defense.”⁶⁹

Courts that have tackled the constitutionality of the DPA more broadly have upheld its remaining authorities; but it is worth noting that the Supreme Court has not directly ruled on the scope of the DPA’s core powers, and the lower court opinions examining the boundaries of the DPA are few in number and quite old, and therefore may not be a reliable guide to how today’s judiciary would tackle constitutional questions raised under the DPA.⁷⁰

That said, the structure of the remaining authorities of the DPA and the DPA’s history should make it difficult for courts to overturn a carefully designed investment program, for a few reasons.

First, the text of the DPA is quite clear that Congress envisioned the DPA being used to advance American energy independence, energy efficiency, and renewable energy.⁷¹ As such, any legal argument that the executive branch is exceeding statutory authorities by using a national defense statute to achieve energy goals would start at an important disadvantage.

Second, challenges to federal spending programs are generally difficult to win; once funding has been appropriated by the legislature, the executive branch is given wide latitude to program expenditures.⁷² Constitutional or statutory challenges to the government’s authority to spend money on certain programs are rare, particularly because standing for such challenges can be difficult to establish.⁷³

⁶⁹ *Id.* § 4533(e).

⁷⁰ *See, e.g., E. Air Lines, Inc. v. McDonnell Douglas Corp.*, 532 F.2d 957, 992-93 (5th Cir. 1976) (upholding as constitutional the government’s power to prioritize contracts, noting that “Congress intended to accord the Executive Branch great flexibility in molding its priorities [] to the frequently unanticipated exigencies of national defense.”); *Condor Operating Co. v. Sawbill*, 514 F.2d 351, 359-62 (Temp. Emer. Ct. App. 1975) (upholding Federal Energy Administration’s requirement that a crude oil producer be forced to continue to sell to a purchaser during the energy crisis (based on an exercise of authority under the Emergency Petroleum Allocation Act of 1973, Economic Stabilization Act of 1970, and DPA) as constitutional against a challenge that the requirement unconstitutionally deprived plaintiffs of property without due process, noting “[e]ssential powers of government to meet this or other crises in perilous times would be frustrated by the adoption of an excessively rigid and unprecedented construction inhospitable to broad realities.”)

⁷¹ 50 U.S.C. § 4502(a)(5)-(6). Indeed, a primer by the Heritage Foundation on the DPA calls for the executive branch to refrain from energy projects under the DPA because they are “inappropriate” and subject the DPA to “abuse by politicians who are tempted to conflate national defense with their own agendas,” while acknowledging that the use of the DPA for energy projects is both routine across administrations and clearly contemplated by the statute. *See* Emma Watkins and Thomas Spoehr, *The Defense Production Act: An Important National Security Tool, But It Requires Work*, Heritage Foundation 1, 6-7, 14 (Oct. 15, 2019) available at <https://www.heritage.org/sites/default/files/2019-10/BG3443.pdf>.

⁷² *See, e.g., Lincoln v. Vigil*, 508 U.S. 182, 192 (1993) (“The allocation of funds from a lump-sum appropriation is [an] administrative decision traditionally regarded as committed to agency discretion” and therefore not subject to judicial review under the Administrative Procedure Act).

⁷³ Some potential exceptions to this general rule include that a house of Congress may have standing to challenge expenditures where Congress had previously sought to explicitly disavow the expenditure in question, *see, e.g., House v. Mnuchin*, 976 F.3d 1, 4, 13-14 (D.C. Cir. 2020), *vacated as moot* 142, S. Ct. 332 (2021) (finding that the House of Representatives had been injured by President Trump’s re-programming of funds from the Department of Treasury Forfeiture Fund, Department of Defense Counterdrug Activities, and other DOD construction funds, towards building a border wall after the House had explicitly “refused to allow” such expenditures.); a state may have standing to sue where it would be concretely harmed by a particular expenditure and seeks to defend Congress’s role in the appropriations process, *see, e.g., California v. Trump*, 963 F.3d 926, 935-44 (9th Cir. 2020), *vacated on other grounds* 142 U.S. 46 (2021); and a competitor for funds may have standing to sue where they are able and ready to bid on a funding opportunity but are denied funding due to unlawful government action. *See Ne. Fla. Chapter of Assoc. Gen. Cont. of Am. v. City of Jacksonville, Fla.*, 508 U.S. 656, 666 (1993) (“a party challenging a set-aside program . . . need only demonstrate that it is able and ready to bid on contracts and that a discriminatory policy prevents it from doing so on an equal basis.”); *see also Planned Parenthood of Greater Wash. and North Idaho v. HHS*, 946 F.3d 1100 (9th Cir. 2020) (“Under the doctrine of competitor standing, the inability to compete on an equal footing in [a] bidding process is sufficient to establish injury-

Third, many of the determinations that must be made by the President in order to exercise DPA authority are the types of judgments that courts can be hesitant to second-guess—those related to actions taken to safeguard national security, particularly in contexts where Congress has explicitly acknowledged the executive branch’s discretion to act.⁷⁴ An expenditure program under the DPA that is carefully justified with reference to the standards of the statute would likely rest on a solid foundation when it came to withstanding judicial scrutiny; however, a program that clearly seeks to exceed the text and purpose of the statute could still be vulnerable, even in the context of ostensible national defense interests.⁷⁵

V. In application: Grid-enhancing technologies

This section briefly outlines how the federal government could use the DPA to facilitate the adoption of grid enhancing technologies (GETs), including by requiring transmission owners to allow the federal government to install GETs.

The challenge of transmission capacity

The decarbonization of American electricity via deployment of new renewable power sources like solar and wind is one of the most crucial components of rapidly achieving net-zero emissions as a nation.⁷⁶ However, new renewables aren’t useful unless they are able to transmit electricity to the electrical grid, as well as across long distances to the places energy is needed most at any given time. In order to meet its clean energy goals, the United States must expand transmission capacity across the electrical grid to allow clean power sources to be connected and utilized; indeed, the Department of Energy estimates that transmission systems will need to expand by 60 percent by 2030, and potentially triple by 2050, in order to meet U.S. climate targets.⁷⁷ Building new transmission infrastructure is a complex undertaking, requiring consultation across federal, state, tribal and local governments, as well as private landowners whose property may be affected (or taken via

in-fact. An agency action that increases competition tilts the playing field for parties that were already competing, and those parties suffer an injury-in-fact.”) (internal quotations and citations omitted).

⁷⁴ See, e.g., *Trump v. Hawaii*, 138 S. Ct. 2392, 2421-22 (2018) (plaintiffs challenged President Trump’s travel ban for being “overbroad and do[ing] little to serve national security interests,” but the Court concluded that it “cannot substitute [its] own assessment of the Executive’s predictive judgments on such matters, all of which are delicate, complex, and involve large elements of prophecy,” and “the Executive’s evaluation of the underlying facts is entitled to appropriate weight, particularly in the context of litigation involving weighty interests of national security and foreign affairs.”); *Haig v. Agee*, 453 U.S. 280, 292 (1981) (“Matters intimately related to foreign policy and national security are rarely proper subjects for judicial intervention.”); *U.S. v. Amiraçmi*, 645 F.3d 564, 581 (3d Cir. 2011) (“federal courts have historically declined to review the essentially political questions surrounding the declaration or continuance of a national emergency.”) (internal quotation and citation omitted).

⁷⁵ See, e.g., *California v. Trump*, 963 F. 3d 926, 944-48 (9th Cir. 2020), *vacated on other grounds* 142 U.S. 46 (2021) (rejecting reprogramming of funds to be spent on border wall construction as unlawful because the statute required that expenditures confront an “unforeseen military requirement,” and individuals attempting to cross the Southern border did not qualify; and because the construction of a border wall did not constitute a “military requirement” within the meaning of the statute).

⁷⁶ See, e.g., *The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050*, U.S. Department of State and U.S. Executive Office of the President 5 (Nov. 2021), available at <https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf>.

⁷⁷ *Queued Up... But in Need of Transmission*, U.S. Dep’t of Energy Office of Policy, available at <https://www.energy.gov/policy/queued-need-transmission>.

eminent domain), environmental impact planning and environmental review, expensive installation efforts, and often litigation.⁷⁸ While these problems must be tackled in the coming years in order to build the infrastructure necessary to meet American clean energy goals, decarbonization efforts will be well-served by also seeking ways to expand transmission capacity without building new physical infrastructure.

The promise of GETs

One of the most promising paths toward rapidly improving the performance of America’s existing transmission infrastructure is the deployment of what are sometimes referred to as “Grid Enhancing Technologies” (GETs). GETs are relatively low-cost technologies designed to improve the efficiency of transmission infrastructure, for example by making real-time adjustments to the volume of electricity transmitted in response to changing environmental conditions, or by routing electricity to less congested areas, or by optimizing transmission routes across the grid.⁷⁹ In total, the deployment of GETs across current infrastructure has the potential to vastly expand the number of renewable energy sources the grid is able to accommodate without needing to build new transmission infrastructure; one study in Kansas and Oklahoma found that the deployment of GETs would enable more than twice the amount of new renewable energy to be integrated into the electrical grid, and that the deployment would pay for itself within half a year.⁸⁰ And a recent Department of Energy case study found that deploying certain GETs could allow the grid to accommodate 23 to 43 percent more renewables in the studied region without building new transmission infrastructure.⁸¹

Obstacles to GET deployment

While some GETs are less developed and proven, others are well-established and provide clear value to the efficiency and reliability of the grid, but are still not widely-deployed.⁸² Barriers to deployment include:

- Mismatched incentives, whereby the regulated profits of transmission owners come from capital investments to build new transmission infrastructure, but do not provide sufficient financial incentives to undertake smaller-scale capital projects or efficiency investments;
- Transmission owners’ right to refuse (and reticence to allow) third parties to invest in GETs on their infrastructure;
- Cost allocation for projects that cross state lines;

⁷⁸ See, e.g., Avi Zevin, Sam Walsh, Justin Gundlach and Isabel Carey, *Building a New Grid without New Legislation: A Path to Revitalizing Federal Transmission Authorities*, Columbia Center on Global Energy Policy (Dec. 14, 2020), available at <https://www.energypolicy.columbia.edu/research/report/building-new-grid-without-new-legislation-path-revitalizing-federal-transmission-authorities>.

⁷⁹ See David Roberts, *Transmission Month: how to make the existing grid work better*, Volts (Feb. 12, 2021), available at <https://www.volts.wtf/p/transmission-month-how-to-make-the>.

⁸⁰ T. Bruce Tsuchida, Stephanie Ross and Adam Bigelow, *Unlocking the Queue with Grid-Enhancing Technologies*, Brattle Group 11 (Feb. 1, 2021), available at https://watt-transmission.org/wp-content/uploads/2021/02/Brattle_Unlocking-the-Queue-with-Grid-Enhancing-Technologies_Final-Report_Public-Version.pdf.

⁸¹ U.S. Dep’t of Energy, “Grid-Enhancing Technologies: A Case Study on Ratepayer Impact,” 71 (Feb. 2022), <https://www.energy.gov/sites/default/files/2022-04/Grid%20Enhancing%20Technologies%20-%20A%20Case%20Study%20on%20Ratepayer%20Impact%20-%20February%202022%20CLEAN%20as%20of%20032322.pdf>.

⁸² See, e.g., Testimony of Craig Glazer on Grid Enhancing Technologies 1-3, FERC Docket No. AD19-19-000 (Nov. 6, 2019), <https://cms.ferc.gov/sites/default/files/2020-05/20191104100614-Glazer%20C%2520PJM.pdf>.

- Coordination costs across transmission operators hampering realizing maximum efficiency gains from some types of GETs; and
- The need to redesign power markets to account for changes in the transmission grid.⁸³

Note that solving any of these problems will require GET-specific strategies and interventions, as each technology comes with its own challenges.

Possible uses of the DPA to achieve GET deployment

Given the DPA's explicit focus on the supply, security, reliability, and efficiency of domestic energy, the statute offers the potential to speed GETs deployment. In particular, the DPA's Title III installation and upgrade authorities would permit the administration to prod, or even ultimately coerce, transmission owners and operators into installing GETs. Many of the pieces required to execute such a strategy have already fallen into place. The White House has already waived the \$50 million DPA expenditure cap per industrial resource shortfall for power grid infrastructure.⁸⁴ And legislation like the Bipartisan Infrastructure Law included significant funding for broad-based grid initiatives.⁸⁵

Some ways in which the DPA may hold the keys to overcoming barriers to GET deployment include:

- The DPA's powers to direct installation and upgrades of equipment could allow the government to require transmission owners and operators to deploy GETs, particularly where transmission owners and operators were not opposed to GET deployment but simply chose not to prioritize such upgrades in favor of other investments;
- The DPA's powers to direct, prioritize, and reorder private contracts, as well as the DPA's powers to direct installation of equipment at private facilities, could conceivably be used to overcome transmission owners' resistance to allowing third parties to install GETs on their infrastructure by requiring transmission owners to enter into GET installation and operation contracts;
- The DPA's powers to direct installation of equipment could allow the government to coordinate deployment of the same technology across multiple transmission systems, overcoming the coordination and interoperability concerns that hamper maximal realization of GET gains;
- The DPA's procurement powers could allow the government to directly procure and provide GET equipment to transmission owners and operators in situations where the cost of equipment has been a barrier to deployment.

Notably, while the DPA could be used as a blunt instrument to compel GETs deployment, these powers could also be used in collaboration with transmission owners and operators in a non-adversarial manner.

⁸³ See, e.g., *Advanced Transmission Technologies*, U.S. Dep't of Energy (Dec. 2020), available at <https://www.energy.gov/sites/prod/files/2021/02/f82/Advanced%20Transmission%20Technologies%20Report%20-%20final%20as%20of%2012.3%20-%20FOR%20PUBLIC.pdf>.

⁸⁴ The White House, "FACT SHEET: President Biden Takes Bold Executive Action to Spur Domestic Clean Energy Manufacturing," (June 6, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/06/fact-sheet-president-biden-takes-bold-executive-action-to-spur-domestic-clean-energy-manufacturing/>.

⁸⁵ See Dep't of Energy, "Bipartisan Infrastructure Law: Grid Deployment," <https://www.energy.gov/gdo/bipartisan-infrastructure-law> (last visited Oct. 3, 2022).



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