



HOW PRESIDENT TRUMP USES THE DEFENSE PRODUCTION ACT TO PROTECT AMERICA FROM THE CHINA VIRUS



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I. Introduction

Over the first three years of his Administration, President Donald J. Trump used a combination of tax cuts, deregulation, energy dominance, and fair trade deals to build one of the most robust and resilient economies in American history. As a result of these growth-inducing policies, by January 20, 2020 – the day the Chinese Communist Party confirmed human-to-human transmission of SARS-CoV-2 – the United States economy was at full employment,¹ real wages were rising,² and black and Hispanic Americans were enjoying record low unemployment rates.³

Since that time, SARS-CoV-2 – hereinafter referred to as the China Virus – has taken a horrific toll. Over 160,000 Americans have died.⁴ As many as 18 million Americans are currently unemployed.⁵ Trillions of dollars of fiscal and monetary stimuli have been expended to combat the sharpest and deepest economic downturn in U.S. history.⁶

Today, the U.S. economy is also in the midst of profound structural changes in sectors heavily impacted by the China Virus such as airlines and mass transit, casinos and gaming, K-12 and higher education, hospitality and leisure, oil and gas drilling, and sports and entertainment. These structural impacts could have long-lasting consequences.

Just how did this happen? And how is President Trump using the Defense Production Act (DPA) and related tools such as the 2020 Coronavirus Aid, Relief, and Economic Security (CARES) Act to protect the American people from the China Virus? This report seeks to answer these questions.

II. The Chinese Communist Party Causes a Global Pandemic

In November 2019, many of the first confirmed cases of people infected with the China Virus were traced back to a wet market in Wuhan, China.⁷ This market is in close proximity to two biological laboratories.⁸ This inconvenient coincidence has led to intense speculation by the media, as well as some in the scientific community, that the China Virus may have escaped or been released from one of the labs⁹ -- and possibly from a biological weapons lab.¹⁰

Beginning in December, and over the course of the next several months, the Chinese Communist Party (CCP) would hide the possibility of a global pandemic from human-to-human transmission of the virus,¹¹ in part behind the shield of the World Health Organization.¹² During these critical months, China — traditionally a significant net exporter of personal protective equipment (PPE) — would vacuum up and hoard much of the world's N95 respirators, goggles, and other PPE, including at least two billion masks.¹³ In February alone, while the World Health Organization was still hiding the pandemic dangers of the China Virus, China bought \$40 million of PPE out of America's warehouses, only to re-sell some of it later at record high prices.¹⁴

China's cornering of the PPE market during this critical time would contribute to worldwide PPE shortages.¹⁵ These shortages would, in turn, impair the ability of healthcare workers around the world – from Milan to New York and beyond – to defend themselves against the China Virus.¹⁶

While hiding the Virus' pandemic potential from the world, the CCP locked down *domestic* travel to prevent infection from spreading throughout Mainland China.¹⁷ As it locked down China, the CCP nonetheless allowed the *international* travel of hundreds of thousands of Chinese nationals.¹⁸ With some of these Chinese nationals almost certainly infected by the Virus, this unrestricted international air travel helped spread and seed the China Virus around the world¹⁹— thereby almost certainly assuring a global pandemic.

Today, under the onslaught of the China Virus, President Trump is using the DPA, and related tools such as funding from the CARES Act, to help engineer the most rapid mobilization of America's public health industrial base since World War II. All over America, new factories, laboratories, and other facilities are sprouting up to help meet U.S. citizens' needs for PPE, pharmaceuticals, testing, therapeutics, and vaccines.

To date, the Department of Health and Human Services (HHS), the Federal Emergency Management Agency (FEMA), and the private sector have jointly coordinated the delivery of 196 million N95 respirators, 815 million surgical masks, over 20 billion gloves, and 34 million face shields. The Strategic National Stockpile (SNS) also is on track to have, by the end of September, close to 150 million N95 respirators, 169 million surgical masks, over 4.5 billion gloves, over 191 thousand ventilators, and tens of millions of other PPE items in inventory.

Under the "Buy American, Hire American" rules²⁰ of the Trump Administration and the Administration's aggressive recruitment of, and support for, domestic manufacturers, much of this new PPE is being produced domestically.²¹ The same is true for medical equipment like ventilators and medical supplies such as needles and syringes necessary to deliver vaccines in mass scale to the American people.

The Administration also continues to ramp up the availability and use of therapeutic drugs like Remdesivir and dexamethasone.²² Against all odds, the Trump Administration has already achieved the shortest interval ever between the identification of a virus and large scale human clinical trials, and is also likely to shatter the previous record for the fastest time to develop and deliver a safe and effective vaccine in human history, with potentially more than 300 million doses to be available as early as January 2021.²³

Driving this strategic pandemic response has been President Trump's measured and tactical use of the Defense Production Act (DPA).

III. Overview of the Defense Production Act

Today's DPA has its roots in the War Powers Acts of 1941 and 1942. These Acts gave President Franklin D. Roosevelt broad authority to mobilize and regulate the domestic economy during World War II.²⁴ While the Acts expired after the end of WWII, a combination of the Cold War and Korean War motivated Congress and the Truman Administration to institutionalize similar executive authorities.

On September 8, 1950, President Truman signed the DPA into law, thereby granting the President specific authorities to expand and expedite domestic production, prioritize critical domestic contracts, and strengthen and mobilize our manufacturing and defense industrial base. Since 1950, the DPA has been reauthorized over 50 times.²⁵ In 2018, the National Defense Authorization Act extended DPA authorities until 2025.²⁶

Today, the DPA is the primary source of presidential authorities to expedite and expand the supply of resources from the U.S. manufacturing and defense industrial base to support military, energy, space, and homeland security programs.²⁷ This is true in both peacetime and during pandemics such as the current one.

Table One lists 78 DPA or DPA-related actions by category taken by President Trump since March to protect the American people from the China Virus. These actions include: six Executive Orders (EO); four Presidential Memoranda (PM); 19 DPA Title I agency level medical responses; six DPA Title III contracts for PPE and testing; 29 additional DPA Title III non-medical contracts to combat disruptive effects to our defense industrial base and defense-critical workforce; one DPA Title VII action; and 13 actions taken to enhance domestic production by leveraging funding from the CARES Act and the Paycheck Protection Program and Health Care Enhancement Act (PPP & HCEA), which was signed by President Trump on April 24, 2020.²⁸

Table One: DPA Actions Taken Since March 2020

Authority	Number of Actions
Presidential Executive Orders	6
Presidential Memoranda	4
DPA Title I	19
DPA Title III (PPE Contracts)	6
DPA Title III (Defense Industrial Base)	29
DPA Title VII	1
CARES Act and PPP & HCEA	13
TOTAL	78

Together, these actions have ushered in a new era of presidential use of the DPA to mobilize the Nation's public health industrial base and thereby aggressively fight the China Virus.

In the remainder of this report, each of these categories of actions will be examined against the broader background of how the DPA works and which Titles of the DPA—specifically Titles I, III, and VII—are being used for different parts of the mission. Before moving to these tasks, it is first useful to provide a brief comment on the DPA's use as it pertains to the Strategic National Stockpile (SNS).

IV. The Strategic National Stockpile and DPA Mission

The SNS was created in 1999 to prepare for various forms of attacks and emergencies.²⁹ After the H1N1 flu virus swept through the country in 2009,³⁰ the Obama-Biden Administration should have recognized the need to better equip the SNS.

Despite the apparent dangers H1N1 posed, the Obama-Biden Administration took few, if any, steps to establish more domestic production of critical PPE, such as N95 respirators, the stockpiled supply of which was not substantially replenished.³¹ Instead, Obama-Biden left President Trump with a depleted stockpile and an inadequate inventory of essential medicines and medical supplies.³² This lack of preparation came despite warnings from experts cautioning of potential shortages during another possible outbreak event.³³

Since the China Virus arrived on U.S. shores, President Trump and the White House Task Force have taken a far more aggressive set of actions to modernize, expand, and replenish the SNS. This SNS goal has been part of the larger mission of using the DPA to catalyze the most rapid industrial mobilization since World War II.

V. Executive Orders and Presidential Memoranda

Table Two lists the six DPA-related Executive Orders (EO) and four Presidential Memoranda (PM) President Trump has issued since March. The purpose of these actions has been to both lay the predicate for the rapid use of the DPA at the agency level by delegating authorities and to, in cases such as General Motors and 3M, take direct, immediate, and forceful action.

On March 18, 2020, President Trump signed EO 13909 on Prioritizing and Allocating Health and Medical Resources to Respond to the Spread of COVID-19.³⁴ This foundational EO delegated the DPA's prioritization and allocation authorities regarding health and medical resources needed to fight the spread of the China Virus to the HHS Secretary.

Through Section 101 of the DPA, these delegated authorities provide for the ability to (1) require performance of contracts or orders (other than contracts of employment) to promote the national defense over performance of any other contracts or order and (2) to allocate materials, services, and facilities as deemed necessary or appropriate to promote the national defense.³⁵

Table Two: Presidential Executive Orders and Memoranda

DATE	POLICY TITLE	SUMMARY
3/18/2020	EO 13909 on Prioritizing and Allocating Health and Medical Resources to Respond to the Spread of Covid-19 ³⁶	Health/medical resources to respond to spread of COVID-19 considered scarce and essential to national defense. Resources distributed to the nation's healthcare system through Title I.
3/23/2020	EO 13910 Preventing Hoarding of Health and Medical Resources to Respond to the Spread of COVID-19 ³⁷	Delegates DPA Title I authority to the Secretary of HHS.
3/27/2020	EO 13911 Delegating Additional Authority Under the DPA with Respect to Health and Medical Resources to Respond to the Spread of COVID-19 ³⁸	Delegates DPA Title I authority to DHS. Delegates DPA Title III and VII authorities to HHS and DHS.
3/27/2020	PM on Order Under the Defense Production Act Regarding General Motors Company ³⁹	Authorizes HHS to require General Motors to accept, perform, and prioritize contracts or orders for ventilators.
4/2/2020	PM on Order Under the Defense Production Act Regarding 3M Company ⁴⁰	Focuses on increasing domestic production and ensuring adequate supply chain for components of N95 respirators.
4/2/2020	PM on Order Under the Defense Production Act Regarding the Purchase of Ventilators ⁴¹	Ensures prioritized access of ventilator manufacturers to <u>domestic</u> supply chains. Allows companies to manage rated orders while ramping up production.
4/3/2020	PM on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use ⁴²	Prevents domestic distributors from diverting PPE overseas so these scarce materials remain in the U.S.
4/28/2020	EO 13917 on Delegating Authority Under the Defense Production Act with Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19 ⁴³	DPA Title I authority delegated to the Secretary of USDA to ensure a continuous food supply chain during outbreak.
5/14/2020	EO 13922 on Delegating Authority Under the DPA to the CEO of the U.S. International Development Finance Corporation to Respond to the COVID-19 Outbreak ⁴⁴	Delegates DPA Title III authority to the DFC to invest in the domestic production of strategic COVID resources
8/06/2020	EO 13944 on Ensuring Essential Medicines, Medical Countermeasures, and Critical Inputs Are Made in the United States ⁴⁵	Establishes Buy American rules for Essential Medicines. Streamlines domestic manufacturing regulations. Promotes Advanced Manufacturing. Prioritizes contracts under DPA. ⁴⁶

On March 23, 2020, President Trump issued EO 13910 on Preventing Hoarding of Health and Medical Resources to Respond to the Spread of COVID-19.⁴⁷ It combats the problem of hoarding the “health and medical resources needed to respond to the spread of COVID-19, such as personal protective equipment and sanitizing and disinfecting products; and attendant price gouging.”⁴⁸ In effect, this order mobilized the Department of Justice (DOJ) to work with HHS and FEMA to crack down on price gouging and hoarding.

This EO would be followed by an April 3 Presidential Memorandum on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use. It established that “it is the policy of the United States to prevent domestic brokers, distributors, and other intermediaries from diverting such [scarce and threatened PPE materials] overseas.”⁴⁹ Included in the list of scarce and threatened PPE that must “remain in the United States for use in responding to the spread” of the China Virus were N95 respirators, surgical masks and gloves, air-purifying respirators, and filters and cartridges. This PM thereby effectively sought to restrict the export of such threatened PPE, in certain circumstances.

Following this Presidential Memorandum, the DOJ located, and HHS and FEMA acquired for distribution to hospitals, medical workers, and first responders, over half a million hoarded PPE items.⁵⁰ This included 299,000 pairs of medical-grade gloves, 192,000 N95 respirators, and 130,000 surgical masks, as well as surgical gowns, disinfectant towels, and more, which HHS and FEMA have distributed to hospitals and frontline responders.⁵¹

DOJ has also brought enforcement actions against profiteers and price gougers and interdicted and seized counterfeit and defective medical products shipped from overseas that threatened to place essential workers at risk.

On March 27, as part of a broader effort to onshore medical supply chains, President Trump signed EO 13911 on Delegating Additional Authority Under the DPA with Respect to Health and Medical Resources to Respond to the Spread of COVID-19. This EO established that “it is the policy of the United States to expand domestic production of health and medical resources needed to respond to the spread of COVID-19, including personal protective equipment and ventilators.”⁵²

Importantly, with this EO, the President delegated DPA authorities to the Secretaries of HHS and the Department of Homeland Security (DHS) to respond “to the spread of COVID-19 within the United States”⁵³ and to ensure that healthcare systems across the country would have the resources needed to surge capacity and capabilities.⁵⁴ This foundational EO further delegated Title III authority “to guarantee loans by private institutions, make loans, make provision for purchases and commitments to purchase, and take additional actions to create, maintain, protect, expand, and restore domestic industrial base capabilities to produce such resources.”

In addition, citing Title VII of the DPA,⁵⁵ the EO addressed antitrust hurdles to industry cooperation by delegating the authority to the Secretaries of HHS and DHS to “provide for the making of voluntary agreements and plans of action by the private sector” with the goal of enabling “greater cooperation among private businesses in expanding production of and distributing such resources”⁵⁶

The DHS Secretary was also given the broad authority, in consultation with other agency heads, to determine “nationwide priorities” and the “allocation of health and medical resources, including by controlling the distribution of such materials...in the civilian market [emphasis added].”⁵⁷ To help ensure effective White House and interagency cooperation, President Trump also directed in this EO that the Assistant to the President for Trade and Manufacturing Policy “shall serve as National Defense Production Act Policy Coordinator.”⁵⁸

To address the threat of food supply disruptions, on April 28, 2020, President Trump signed EO 13917 on Delegating Authority Under the DPA with Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19.⁵⁹ It notes that outbreaks of the China Virus “among workers at some [food] processing facilities have led to the reduction in some of those facilities’ production capacity” and that some states had taken actions that “have led to the complete closure of some large processing facilities.” The EO was therefore designed to ensure “that processors of beef, pork, and poultry ... in the food supply chain continue operating and fulfilling orders to ensure a continued supply of protein for Americans.”⁶⁰

Under the authority of EO 13603, President Trump directed the Secretary of Agriculture to first “determine the proper nationwide priorities and allocation of all the materials, services, and facilities necessary to ensure the continued supply of meat and poultry” and then “issue such orders and adopt and revise appropriate rules and regulations as may be necessary to implement this order.”⁶¹ In the wake of this EO, the Department of Agriculture issued a Memorandum of Understanding on May 19th with the Food and Drug Administration (FDA) to help prevent interruptions at FDA-regulated food facilities, including fruit and vegetable processing.⁶²

On May 14, President Trump signed Executive Order 13922 delegating DPA Title III authority to the Chief Executive Officer of the United States International Development Finance Corporation (DFC). The DFC’s mission under the order is to accelerate and support investment in the domestic production and onshoring of strategic pandemic response resources and relevant supply chains.⁶³

Congress created the DFC in 2018⁶⁴ by consolidating the Overseas Private Investment Corporation, first established in 1971, and the U.S. Agency for International Development’s Development Credit Authority, which issued its first loan guarantee in 1999.⁶⁵ Under the authority of the May 14th EO, the DFC established a separate investment team to administer a “DPA Loan Program” for domestic support using DoD funds. Projects eligible for a “DPA loan” include those that,

*...support the domestic response to and recovery from COVID-19 with investments in health supply chains (including the production and distribution of PPE, ventilators, therapeutics, diagnostics, vaccines, and other medical supplies); innovative care delivery systems; digital health and related IT systems; data science innovations; medical technology and devices; pharmaceuticals; life sciences; and other investments in materials or technologies in relevant supply chains (including electronics, manufacturing, machine tools, industrial controls, and raw materials).*⁶⁶

Each of these types of projects is critical to the expansion or re-shoring of companies in the United States in sectors important to the national response and recovery from the China Virus.

On August 6, to further bolster the efforts of the DPA to onshore production and jobs and strengthen America's public health industrial base, President Trump signed an Executive Order on Ensuring Essential Medicines, Medical Countermeasures, and Critical Inputs Are Made in the United States.⁶⁷ This order works synergistically with other DPA efforts to onshore production.

Most importantly, this EO establishes Buy American domestic preference rules for the purchase of the essential medicines, medical supplies, and medical equipment the U.S. needs for its public health needs during the China Virus pandemic and thereafter. It also directs HHS to “use the authority under section 101 of the Defense Production Act of 1950... to prioritize the performance of Federal Government contracts or orders for Essential Medicines, Medical Countermeasures, or Critical Inputs over performance of any other contracts or orders, and to allocate such materials, services, and facilities as the Secretary deems necessary or appropriate to promote national defense.”⁶⁸

To accelerate the construction and operation of domestic production facilities, the EO also calls for regulatory streamlining at the Environmental Protection Agency and FDA. It also encourages the use of Advanced and Continuous Manufacturing processes to reduce waste streams and costs and ensure a secure stock of reasonably priced medicines, medical supplies, and medical equipment.

Regarding the remainder of the actions in Table Two, we will discuss the General Motors and 3M Corporation actions below as well as those Presidential actions taken with respect to insuring the security of ventilator supply chains. In the meantime, we turn now to an extended discussion of each of the three main DPA authorities which are now being used to engineer the most rapid industrial mobilization of American manufacturing might since World War II.

VI. Using DPA Title I to Attack the China Virus

DPA Title I provides authorities to require acceptance and performance of contracts and to allocate materials, services, and facilities to “promote the national defense.”⁶⁹ Through this authority, DPA Title I may be used, for example, to prevent any product in short supply that is needed for national security, e.g., face masks, from being exported out of the country.

It is important to note that DPA Title I authorities are not just for national emergencies such as a global pandemic. They are typically used many times throughout the year by DoD for so-called “rated orders” in the normal course of business and government activity.

For example, if an F-16 needs one piece of a motor for a repair, a DPA rated order may be issued to fill that need by prioritizing the relevant contractor's or sub-contractor's access to the motor. In the 2018 Defense Production Act Committee Report to Congress, DoD “estimates it places approximately 300,000 rated orders each year.”⁷⁰

Importantly, as we will see with the examples of General Motors and 3M below, the ability of the President to use Title I to prioritize contracts and production also allows DPA Title I to be used as a “forcing function” to move private sector participants more expeditiously towards national goals.

1.) DPA Title I Use During the Pandemic

Table Three lists a set of 19 DPA Title I actions taken at the agency level in a China Virus context through the delegation of presidential authorities to the relevant agency heads.

Table Three: Agency Level DPA Title I Medical Responses to the China Virus

	Date Approved	Requestor	Resource Type & Quantities	Vendors
1	3/28/2020	FEMA	Upstream machine shop services ⁷¹	Puritan
2	3/28/2020	FEMA	Blanket request required to invoke DPA ⁷²	n/a
3	3/30/2020	HHS	25.5K increase in ventilators ⁷³	Hamilton
4	3/30/2020	HHS	18.9K increase in ventilators ⁷⁴	Zoll
5	4/5/2020	FEMA	Memo expediting N95 respirators to NJ ⁷⁵	n/a
6	4/8/2020	HHS	30K increase in ventilators ⁷⁶	General Motors
7	4/8/2020	HHS	43K increase in ventilators ⁷⁷	Philips
8	4/10/2020	FEMA	Applied rating to Zoll ventilator contract ⁷⁸	Zoll
9	4/10/2020	FEMA	Memo compelling sale of filtering face pieces and respirators in shipment ⁷⁹	n/a
10	4/13/2020	FEMA	Authorized construction of alternate care facilities ⁸⁰	n/a
11	4/13/2020	HHS	2.4K increase in ventilators ⁸¹	General Electric
12	4/13/2020	HHS	3.4K increase in ventilators ⁸²	Hill-Rom
13	4/13/2020	HHS	1K increase in ventilators ⁸³	Medtronic
14	4/13/2020	HHS	2.5K increase in ventilators ⁸⁴	ResMed
15	4/13/2020	HHS	22K increase in ventilators ⁸⁵	Vyaire
16	4/13/2020	HHS	12K increase in ventilators	Combat Medical
17	4/16/2020	FEMA	Priority ratings for PPE/Equipment for DoD Medical Treatment Facilities ⁸⁶	n/a
18	4/21/2020	HHS	12K increase in Powered Air Purifying Respirators ⁸⁷	BioMedical Devices
19	7/8/2020	HHS	50M needles and syringes to support vaccination efforts ⁸⁸	Becton, Dickinson

A majority of the actions listed in Table Three were taken to secure the supply chains for, and production of, domestic ventilator production using Title I tools such as rated contracts. For example, from March 30 to April 13, ten such actions were taken in support of ventilator manufacturers.⁸⁹ As noted by HHS Secretary Alex Azar:

President Trump and HHS's use of the DPA is getting private manufacturers what they need to ramp up ventilator production rapidly. We are grateful to the patriotic Americans at companies working around the clock and retooling factories to increase ventilator production. The thousands of ventilators delivered to the Strategic National Stockpile starting this month, continuing through the spring and summer, will mean we have more capacity to respond to the pandemic as it evolves. HHS and FEMA deployment of ventilators from the stockpile have helped ensure that hospitals in states such as New York have not run out of ventilator capacity while working to save lives.⁹⁰

These swift and decisive DPA actions were a critical part of the strategy to turn the United States from a net importer to an exporter of ventilators. Because of DPA actions like these, no American in need has gone without a ventilator.

Other Title I actions indicated in Table Three include measures to ensure sufficient needle and syringe production to support vaccination efforts, the compelling of the sale of all filtering face pieces and respirators in shipment, the expediting of a shipment of N95 respirators to New Jersey in the face of surging infections in that state, and the authorization of the construction of alternate care facilities, which are sites “temporarily converted for healthcare use during a public health emergency.”⁹¹

2.) DPA Title I Use as a Forcing Function

As previously noted, President Trump has also used DPA Title I as a forcing function to steer companies to provide critically needed products or equipment by prioritizing orders. While such interventions should be used sparingly, this Administration has not hesitated when a company has failed to step up for the national interest and when American lives are at stake. Examples involving General Motors and 3M illustrate the power of the DPA in a forcing function context.

a) General Motors Helps America Become the Ventilator Export King

On March 27, 2020, President Trump directed the Secretary of HHS to use DPA authority to immediately shift some of General Motor’s productive capacity to manufacture ventilators, which are used to keep patients alive in Intensive Care Units.⁹² What happened next would become one of the most remarkable stories in American industrial history.

General Motors (GM) used its prodigious design and engineering resources to digitally blueprint the entire manufacturing process of a small company named Ventec, which was producing just 25-30 ventilators a week in Bothell, Washington.⁹³ GM used these images to replicate, and dramatically scale up, the Ventec operation at a repurposed GM factory in Kokomo, Indiana.

GM also sent out a call to its expansive domestic supply chain to help manufacture the more than 700 components each ventilator would need for assembly.⁹⁴ In a mere 17 days, GM-Ventec was

producing ventilators—and with the help of UPS, hospitals in Chicago, Illinois, and Gary, Indiana, received ventilators within 20 days.⁹⁵ The venture is now on track to deliver 25,000 ventilators to the SNS by the end of August.⁹⁶

More broadly, with the catalyst of the DPA, the U.S. has become the world's leading ventilator producer, with an expected 191,000 in the SNS inventory by the end of September, is on track to donate 8,000 ventilators to countries in need,⁹⁷ and is now a net exporter.

b) 3M N95 Respirators

N95 respirators are specialized masks designed to be worn over the mouth and nose to prevent the inhalation of aerosols.⁹⁸ As China Virus cases in the U.S. rose rapidly in April,⁹⁹ more N95 respirators were urgently needed to meet the growing national demand.

The 3M Company, an American company which leads the world in N95 respirator production, initially resisted prioritizing the needs of the American people in the heat of the China Virus pandemic.¹⁰⁰ In response, President Trump signed a Presidential Memorandum on April 2nd that directed 3M, as well as its affiliates and subsidiaries, to scale up production of N95 respirators to maximum capacity, and to allow the U.S. government to purchase these respirators as necessary.¹⁰¹

3M is now producing an additional 39 million respirators per month and will be able to produce 1.2 billion respirators domestically by the end of the year.¹⁰² 3M has also imported a total of 169 million N95 respirators from its overseas manufacturing facilities to meet short-term demand.¹⁰³

VII. Using DPA Title III to Attack the China Virus

DPA Title III provides the President with broad authorities to “create, maintain, protect, expand, or restore domestic industrial base capabilities essential for the national defense.”¹⁰⁴ Under its authorities, the government may provide economic incentives to aid in the timely delivery of essential domestic industrial resources, materials, or critical technologies. Such Title III incentives may include purchases (e.g. of capital equipment), purchase commitments (short or long-term contracts), loans, loan guarantees, and other means.

Historically, DPA Title III funds have been regularly appropriated by Congress and used by the Department of Defense (DoD) outside of the China Virus context to strengthen America's defense industrial base, enhance national security, and support innovative military and energy technologies.¹⁰⁵ However, during the China Virus crisis, DoD's normal level of appropriations has been significantly increased through CARES Act funding. This dramatic increase in funding has allowed a much more expansive use of Title III to fight both the China Virus *directly* and to address significant economic threats that have arisen to our defense industrial base and essential defense workers.

In the remainder of this section, we will review three specific uses of DPA Title III authorities: (1) the use of DPA Title III in the normal course of business and government; (2) the use of DPA Title III to attack the China Virus in a *medical* context; and (3) the use of DPA Title III in a *non-medical* context to address the enormously disruptive effect of the pandemic on our manufacturing and industrial base capabilities and our defense-critical workforce.

1.) DPA Title III Non-China Virus Actions

Long before the China Virus arrived on American shores, the Trump administration was aggressively using DPA Title III authorities and funds to strengthen America’s defense industrial base. Table Four lists 22 DPA Title III Presidential Determinations issued between June of 2017 and July of 2019 towards this mission. These various Presidential Determinations provide DoD with the funding authority to address various gaps and vulnerabilities in our defense industrial base. (Appendix A lists an additional 46 DPA Title III contract awards issued from 2017 through 2020 authorized by Presidential Determinations made in this and previous administrations).

Table Four: DPA Title III Presidential Determinations Under President Trump

	Date Approved	Project
1	6/13/17	National Security Space Industrial Base
2	6/13/17	Secure Hybrid Composite Shipping Containers
3	6/13/17	3-D, Ultra-Hi Density Microelectronics For Information Protection
4	6/13/17	High Strength Co-Polymer Aramid Fiber for Munition Manufacturing
5	6/13/17	Adenovirus Vaccine Production
6	1/23/18	Advanced Photomasks for Electronics
7	1/23/18	Thin Wall Castings
8	10/5/18	Alane Fuel Cells
9	10/5/18	Circular Lithium-Sea Water Batteries Production
10	1/16/19	Energetic Materials Production For DoD Munitions
11	1/16/19	Precursors Production For DoD Munitions
12	1/16/19	Inert Materials Production For DoD Munitions
13	1/16/19	Advanced Manufacturing Techniques For DoD Munitions
14	3/12/19	Sonobuoys Production
15	6/12/19	Small Unmanned Aerial Systems
16	6/12/19	Rare Earth Permanent Magnet Production
17	7/22/19	Rare Earth Permanent Magnet Production
18	7/22/19	Rare Earth Separation And Processing Capability
19	7/22/19	Rare Earth Separation And Processing Capability
20	7/22/19	Rare Earth Metal And Alloy Processing Capability
21	7/22/19	Domestic Capacity Expansion for F135 Integrally Bladed Rotors for Aircraft
22	6/24/20	Domestic Manufacturing for Composites

The Trump Administration’s frequent use of Title III prior to the pandemic, as evidenced in Table Four and Appendix A, has its roots in EO 13806 which was signed on July 21, 2017. It directed an assessment and strengthening of the manufacturing and defense industrial base.¹⁰⁶

The DoD report required by that order was published in September 2018. It identified numerous gaps and vulnerabilities in the supply chains of America’s defense industrial base and recommended the use of DPA Title III funds to address some of those vulnerabilities.

A month later, President Trump issued DPA Title III Presidential Determinations¹⁰⁷ for Alane fuel cells,¹⁰⁸ the Navy’s future unmanned underwater vehicles, and for lithium sea-water batteries, which are critical to anti-submarine warfare. In January 2019, President Trump then issued four additional DPA Title III Presidential Determinations. These targeted actions increased production capacity for energetic, inert, precursor, and chemical materials for munitions.¹⁰⁹

In March 2019, another DPA Title III Presidential Determination was granted for the domestic production of sonobuoys. This is a critical technology used by the U.S. Navy to listen for adversarial sub-surface craft.¹¹⁰

In June and July 2019, seven additional DPA Title III Presidential Determinations were issued for the production of innovative industries, including small unmanned aerial systems (drones);¹¹¹ five orders for the domestic separation and processing of rare earth materials used in critical magnets and weapons;¹¹² and an additional order for F135 integrally bladed rotors.¹¹³

2.) DPA Title III Actions in a *Medical China Virus* Context

Within a *China Virus medical* context, the Trump Administration has aggressively used DPA Title III to provide various forms of financial assistance to ensure the timely production of essential medicines, medical supplies, and medical equipment. Table Five lists six Title III packages issued by DoD focusing on the production of N95 respirator masks and increased foam swab production.

Table Five: Department of Defense DPA Title III Contracts for PPE and Testing Supplies

	Date Approved	Resource Type & Quantities	Vendors	Contract Value Millions
1	4/15/20	12.5M per month capacity increase of N95 respirators beginning in September ¹¹⁴	Owen & Minors Halyard	\$29.3
2	4/15/20	12M per month capacity increase of N95 respirators beginning October ¹¹⁵	Honeywell	\$27.3
3	4/17/20	13M per month capacity increase of N95 respirators beginning June ¹¹⁶	3M (Phase I)	\$76
4	4/27/20	20M increase in foam swab capacity ¹¹⁷	Puritan (Phase I)	\$75.5
5	5/1/20	3.1M per month capacity increase of N95 respirators beginning October ¹¹⁸	Hollingsworth and Vose	\$1.9
6	8/10/20	110K test kits per month ¹¹⁹	BioFire Defense	\$3.1

For example, on April 27, Puritan Medical, a 100-year old, third generation, family-owned, made in America company,¹²⁰ received an award of \$75.5 million to increase its capacity from 20 million to 40 million foam-tipped testing swabs per month.

As with GM, the Puritan example aptly illustrates America’s innovative ability during this crisis to rapidly repurpose America’s manufacturing platforms. In particular, Bath Iron Works, which usually makes America’s destroyers like the Arleigh Burke-class, was sub-contracted to manufacture a key piece of machinery Puritan needed to wrap and package swabs, protecting their quality and helping keep them sterile.¹²¹

3.) DPA Title III Actions in a *Non-Medical* China Virus Context

The China Virus has had an enormously disruptive effect on our manufacturing and defense industrial base capabilities and our defense-critical workforce. Sectors such as shipbuilding, aircraft manufacturing, and clothing and textiles have been particularly hard hit.

Table Six lists 29 projects DoD has funded using DPA Title III money appropriated as part of the CARES Act. These projects range from space solar cells, steel manufacturing for shipbuilding, and textiles for soldier uniforms to composites for aerospace supply chains.

It is absolutely essential to keep our defense-critical factories open and our workforces safe. As Table Six illustrates, on the next page, DPA Title III is quietly being used to fulfill this mission.

TABLE SIX ON NEXT PAGE

Table Six: DPA Title III Non-Medical Contracts to Combat Disruptive China Virus Effects to America’s Defense Industrial Base and Defense-Critical Workforce

	Date Approved	Project	Contract Value (Millions)
1	5/19/20	Space Solar Cells ¹²²	\$6.0
2	5/19/20	Space Solar Cell Substrates ¹²³	\$9.3
3	5/28/20	Shipbuilding Welding ¹²⁴	\$0.5
4	5/28/20	Body Armor Production ¹²⁵	\$15.0
5	6/2/20	Steel Manufacturing for Shipbuilding ¹²⁶	\$19.5
6	6/5/20	Aerospace Supplier Sustainment ¹²⁷	\$80.0
7	6/6/20	Aircraft Propulsion Industry Sustainment ¹²⁸	\$20.0
8	6/16/20	Die Forging Support for Aircraft ¹²⁹	\$25.0
9	6/16/20	Aircraft Fuel System Sustainment ¹³⁰	\$14.9
10	6/16/20	Soldier Uniform Fabrics and Textiles ¹³¹	\$2.0
11	6/16/20	Shipbuilding Supply Chain Development ¹³²	\$55.0
12	6/17/20	Aircraft Propulsion Industry Sustainment ¹³³	\$55.0
13	6/18/20	Shipyards Improvement Program ¹³⁴	\$50.0
14	6/19/20	Domestic small Unmanned Aircraft System (sUAS) Traffic Management Tool Sustainment ¹³⁵	\$3.3
15	6/22/20	Space Industry Radar Sensing Ground Station Sustainment ¹³⁶	\$15.0
16	7/1/20	Domestic sUAS Component Production ¹³⁷	\$1.5
17	7/1/20	Domestic sUAS IR Sensor Production ¹³⁸	\$1.6
18	7/1/20	Domestic sUAS Component Production ¹³⁹	\$4.0
19	7/1/20	Domestic sUAS Flight Controller Production ¹⁴⁰	\$3.0
20	7/6/20	Navy Alloy Plate Capacity for Shipbuilding ¹⁴¹	\$56.0
21	7/8/20	Aircraft Fuel Bladder Sustainment ¹⁴²	\$14.9
22	7/10/20	Large Fixed Pitch Propellers for Naval Ships ¹⁴³	\$22.0
23	7/21/20	Domestic Rare Earth Permanent Magnet Production ¹⁴⁴	\$28.8
24	7/21/20	Electronic Microdisplays OLED Production ¹⁴⁵	\$33.6
25	7/24/20	Shipbuilding Supply Chain Development ¹⁴⁶	\$31.0
26	7/28/20	Aircraft Propulsion Industry Sustainment ¹⁴⁷	\$62.9
27	7/31/20	Mobile Communications Receiver Sustainment ¹⁴⁸	\$3.6
28	7/31/20	Aircraft Propulsion Industry Sustainment ¹⁴⁹	\$0.5
29	8/12/20	Microelectronics Supply Chain Sustainment ¹⁵⁰	\$7.0

VIII. CARES Act and PPP Funding to Supplement DPA Efforts

On March 27, President Trump signed the CARES Act into law. This legislation appropriated \$2.2 trillion in emergency assistance, including \$141 billion for HHS China Virus response and \$1 billion for DoD DPA Title III actions.¹⁵¹ The Act includes language authorizing projects to mitigate critical shortfalls in PPE, medical supplies, and medical equipment. These goals closely align with the traditional DoD DPA Title III scope and mission to create, strengthen, and expand the defense industrial base.

On April 24, 2020, President Trump signed the Paycheck Protection Program and Health Care Enhancement Act (PPP & HCEA). It, along with the CARES Act, provides additional authorities and funds to invest in industrial expansion.

Utilizing the Economy Act (48 C.F.R. § 17.502-2),¹⁵² which authorizes federal agencies to order goods and services from other federal agencies, DoD and HHS have been working together, in consultation with the White House, to leverage funding appropriated in CARES and PPP & HCEA to support pandemic response requirements. The clear mission: accelerate the China Virus response and recovery while replenishing, modernizing, and making a more resilient SNS.

Table Seven lists 13 projects funded by HHS CARES or the PPP & HCEA since May. These projects range from the production of N95 respirators, gloves, and testing swabs to the initial manufacturing capacity of injector technologies for the delivery of vaccines and securing the supply of the filter media needed for respirators.

TABLE SEVEN ON NEXT PAGE

Table Seven: HHS Cares and PPP/HCEA Actions to Enhance Domestic Production

	Date Approved	Resource Type & Quantities	Vendors
1	5/1/20	26M per month capacity increase of N95 respirators beginning October 2020 ¹⁵³	3M (Phase II)
2	5/8/20	5M per month capacity increase of N95 respirators beginning January 2021 ¹⁵⁴	Moldex
3	5/12/20	Initial manufacturing capacity of injector technology for vaccine over the next year ¹⁵⁵	ApiJect
4	6/11/20	Ramp up production for 140 million valor glass vials	Corning Incorporated
5	6/11/20	Increase capacity to 120 million vials per year	SiO2 Materials Science
6	6/19/20	Equipment and facility upgrades necessary for NIOSH compliance to produce N95 filter media by September 2020 ¹⁵⁶	Lydall
7	7/15/20	Equipment and supplies to stand up 18 production lines for gloves by October 2020 ¹⁵⁷	Renco
8	7/17/20	Equipment required for four additional production lines for surgical masks by March 2021 ¹⁵⁸	CrossTex
9	7/21/20	Production facility in Puerto Rico for consumable manufacturing within six months ¹⁵⁹	Pall Corporation
10	7/24/20	Produce filtration media to support 60M N95 respirators ¹⁶⁰	NPS
11	7/25/20	Expand production of custom sample collection and processing consumables for testing ¹⁶¹	Hologic
12	7/29/20	Increase domestic production of testing swabs ¹⁶²	Puritan
13	8/05/20	Procurement of 500 million syringes for the SNS ¹⁶³	Multiple Vendors

IX. Patriotic Companies Answering the Call to Duty

Despite the broad scope and effectiveness of President Trump’s numerous DPA actions, some critics, from Nancy Pelosi¹⁶⁴ to Joe Biden¹⁶⁵, have called for a more command-and-control approach. However, contrary to the current socialist rhetoric, the DPA does not give the government the authority to seize or take over factories. Rather, the powers of the DPA are limited to those described earlier in this report.

Despite this limitation, the few times President Trump has used the DPA as a forcing function to prioritize production or orders such as with GM and 3M, he has sent a very strong and clear signal to corporate America: When given the choice between saving American lives and maximizing profits, there is only one choice – to save American lives.

The vast majority of business executives the White House has interacted with are true patriots who will do what is right. As a result, President Trump has been able to use his DPA authorities with

a firm but deft touch while harnessing the power of government with the innovation of the private sector to strengthen this country every day.

To end this report, it is useful to highlight some of the patriotic efforts of the private sector visible over the last six months against the backdrop of implementation of the DPA.

1) American Breweries and Distilleries

At least 830 alcohol producers—nearly half of the Nation’s 2,000 craft distilleries¹⁶⁶—have repurposed some of their production from alcohol to hand sanitizer. This has included industry leaders such as Anheuser-Busch, Diageo, and Bacardi along with small independent breweries and distilleries across the Nation.¹⁶⁷

Among such distilleries, Pernod-Ricard quickly responded to President Trump’s call to action by converting its production lines from drinking alcohol to hand sanitizer in a matter of days at facilities in Arkansas, West Virginia, Kentucky, and Texas.¹⁶⁸ Pernod-Ricard, while maintaining current assembly lines, set up four additional lines across the country for hand sanitizer production. At peak operation, they were producing upwards of 28,000 gallons a week.

As of mid-July, Pernod-Ricard had coordinated with FEMA and the White House to donate over 215,000 gallons of hand sanitizer to hot zones all across the country (at an estimated retail value of \$1.1 million). As part of this initiative, “Operation Blue Bloods” was launched by the White House Office of Trade and Manufacturing Policy (OTMP) to answer an SOS call for PPE by the New York Police Department (NYPD). As part of this operation, Pernod-Ricard has donated thousands of gallons of hand sanitizer weekly to the NYPD. Hundreds of other police departments, hospitals, and nonprofits have received hand sanitizer as well.¹⁶⁹

2) Traditional Industry Manufacturers

To meet the Nation’s demand for N95 respirators, Honeywell, with the help of the White House OTMP, stood up a new factory in Rhode Island in a lightning-fast five weeks, a process that normally takes up to nine months. Honeywell also ramped up manufacturing capabilities in Phoenix, Arizona. These two factories created more than 1,000 jobs and are producing more than 20 million N95 respirators per month—creating American jobs and saving lives.¹⁷⁰

3) The Aerospace Industry

Industry leaders, such as General Dynamics, Raytheon Technologies, Northrop Grumman, and the Aerospace Industries Association, have used their 3D printing technologies, current supply chains, and pre-existing PPE supply to service the needs of the Nation.

Raytheon Technologies donated 3,500 Tyvek suits, 175,000 gloves, 22,000 N95 respirators, and 500 face shields. General Dynamics donated nearly 9,000 N95 respirators and 3,300 Kimberly Clark A-Series suits.

When the Chief of the NYPD reached out to the White House in March 2020 requesting urgently needed PPE for homicide detectives responsible for processing those who died while sick with the China Virus, General Dynamics and Raytheon Technologies delivered 4,294 Tyvek suits to the NYPD in 24 hours.

Northrop Grumman used their innovative 3D printing technology to produce thousands of face shields to donate to hospitals in hot zones across the country. The Aerospace Industries Association gathered their members to coordinate stock donations of over 16,750 Tyvek and Tychem suits, 2,350 boot covers, and hundreds of lab coats and frocks.¹⁷¹

4) The Textile Industry

After New York City Mayor Bill de Blasio ordered more than 300,000 gowns from China that never arrived, he turned to the White House for help on Easter Sunday. At the suggestion of the White House Office of Trade and Manufacturing Policy, de Blasio mobilized cutters and sewers in Brooklyn to standup a factory to make gowns.

In the meantime, the National Council of Textile Organizations, in coordination with the Trump Administration and FEMA's Rear Admiral John Polowczyk, secured 1 million yards of waterproof fabric from Owens & Minor, a Virginia-based healthcare logistics company.¹⁷² Within seven days, this fabric from North Carolina was delivered to a garment district in New York City, which had all but been destroyed by the sweat shops of China and other Asian countries, providing 500 new jobs for New Yorkers.

As of July, Owens & Minor has produced 400,000 gowns and approximately 50 million masks per month for healthcare workers in New York City and around the country.¹⁷³ Additionally, FEMA has contracted with Milliken and Company in South Carolina and Service America in Ohio to procure millions of isolation gowns to support front line medical workers across America.

5) The Freight Industry

United Parcel Service (UPS) and Federal Express (FedEx) have worked closely with the Trump Administration by generously donating their logistics, freight, and shipping services within hours of notification to move critical supplies to first responders across the country. UPS also coordinated a dramatic 2:30 AM delivery of GM-Ventec ventilators to a hospital in the suburbs of Chicago. This was the beginning of GM's distribution of an initial 600 ventilators.¹⁷⁴

In an operation dubbed by the White House OTMP as "Operation Italian Swab Job," FedEx helped deliver nearly a million swabs from Italy under White House coordination. The operation started on March 13th when a representative from HHS called the White House and reported that a company named Copan had a large shipment of nasopharyngeal swabs (necessary for China Virus testing) stuck at the Italian border as a result of restricted air travel.

The White House immediately asked the DoD to send a military flight to Italy to pick up Copan's swabs and deliver them to Memphis. After a White House call to FedEx CEO, Fred Smith, FedEx had six planes waiting to dispatch the swabs to cities and frontline healthcare workers across America. From the first phone call to final delivery, Operation Italian Swab Job was completed in 72 hours.¹⁷⁵

6) Retailers and Small Business

Retailers and small businesses around the Nation have also pitched in to help in the China Virus response. Home Depot was among the many U.S. companies who graciously donated every piece of PPE they had to the American people. Home Depot has donated tens of thousands of N95 respirators, Tyvek suits, goggles, and 30,000 pairs of boot covers.¹⁷⁶ These medical supplies could have been sold in their stores, but instead went to protect first responders in a time of need. Companies like Transfer Flow Inc., Simmons Knife & Saw, Robinson Fans Holdings, the American Society of Plastic Surgeons, DRT Holdings, Alfa Tools, Precision Edge Surgical Products, and dozens of others have graciously shipped and donated their PPE supplies to hot zones all over the Nation.

7) Meat and Poultry Industry

On April 28, 2020, the President signed an Executive Order that found that meat and poultry are scarce resources for the purpose of the DPA and directed the Secretary of the Department of Agriculture to prioritize contracts and allocate these resources as appropriate to avoid shortages in the United States.¹⁷⁷ It has not been necessary to use this authority to date due to the determination, work ethic, and innovation of the food processing industry in the United States.

X. Conclusion

The China Virus outbreak is an invisible enemy unlike any in modern history. The intentional shielding of the outbreak by the Chinese Communist Party and World Health Organization virtually ensured the outbreak of a global pandemic that has killed over 160,000 Americans and inflicted great damage on the American economy.

Using the DPA and other authorities, President Trump has moved quickly to protect the American people and defend our industrial base. His aggressive use of the DPA has not only saved American lives during this pandemic. It is helping to protect and secure America's production and distribution of our essential medicines and critical medical equipment and supplies.

Appendix A: DoD DPA Title III Contracts Issued 2017 through 2020

	Year	Sector	Project	Contract Value (Millions)
1	2017	Space Industrial Base	Next Generation Reaction Wheel Assemblies	\$0.1
2	2017	Space Industrial Base	Assured Access to Field Programmable Gate Arrays	\$1.3
3	2017	Munitions	Light-weight Ammunition & Armor Initiative	\$1.5
4	2017	Space Industrial Base	Electron Beam Direct Write	\$9.4
5	2017	Space Industrial Base	Radiation-Hardened Transistors & Diodes	\$3.0
6	2017	Electronic Warfare	Next Generation Jammer GaN MMIC & Circulator	\$4.4
7	2017	Electronics	3D Microelectronics for Information Protection	\$13.2
8	2017	Space Industrial Base	Additive Manufacturing for Liquid Rocket Engines	\$0.3
9	2017	Space Industrial Base	Space Qualified Solar Cell Germanium Substrate Supply	\$3.1
10	2018	Electronics	Advanced Microelectronics Foundry (Photo Mask)	\$5.0
11	2018	Other/Biological	Modernized Production Adenovirus Vaccine (MPAV)	\$15.0
13	2019	Homeland Security	Secure Hybrid Composite Intermodal Containers (SHCIC)	\$6.6
14	2019	Electronics	Strategic Rad Hard Microelectronics	\$5.6
15	2019	Soldier Systems	Activated Carbon Capacity Expansion	\$2.2
16	2019	Space Industrial Base	Photovoltaic Production Enhancements	\$1.0
17	2019	Space Industrial Base	Advanced Materials Development	\$6.0
18	2019	Space Industrial Base	Electron Beam Direct Write	\$22.9
19	2019	Space Industrial Base	Advanced Materials Development	\$6.0
20	2019	Electronics	Strategic Rad Hard Microelectronics	\$3.2
21	2019	Soldier Systems	Activated Carbon Capacity Expansion	\$5.6
22	2019	Electronics	Strategic Rad Hard Microelectronics	\$2.0
23	2019	Aircraft	F135 Integrally Bladed Rotors (IBR)	\$12.5
24	2019	Materials	Next Generation Soldier Protection	\$22.8
25	2019	Space Industrial Base	Radiation Hardened Digital/Analog Production/Qualification	\$4.5
26	2019	Space Industrial Base	Solar Cell Photovoltaic and Panel Production	\$1.6
27	2019	Electronics	Strategic Rad Hard Microelectronics	\$0.7
28	2019	Materials	High Purity Beryllium	\$11.8

29	2020	Materials	Thin Wall Castings for Military Applications	\$15.8
30	2020	Space Industrial Base	Next Generation Reaction Wheels	\$0.9
31	2020	Power Storage and Generation	Thermal Battery Project	
32	2020	Chemical Production	Ammonia Perchlorate 2nd Source Qualification	\$0.1
33	2020	Chemical Production	Ammonia Perchlorate 2nd Source Qualification	\$0.05
34	2020	Space Industrial Base	Radiation Hardened Digital/Analog Production/Qualification	\$1.9
35	2020	Chemical Production	Ammonia Perchlorate 2nd Source Qualification	\$0.2
36	2020	Homeland Security	Secure Hybrid Composite Intermodal Containers (SHCIC)	\$10.2
37	2020	Materials	Shielded Infrastructure	\$6.8
38	2020	Electronics	Strategic Rad Hard Microelectronics	\$10.3
39	2020	Power Storage and Generation	Thermal Batteries	\$0.05
40	2020	Power Storage and Generation	Lithium Sea Water Batteries	\$10.0
41	2020	Space Industrial Base	Advanced Materials Development	\$2.0
42	2020	Space Industrial Base	Advanced Materials Development	\$2.0
43	2020	Electronics	Strategic Rad Hard Microelectronics	\$6.0
44	2020	Power Storage and Generation	Alane Fuel	\$2.0
45	2020	Space Industrial Base	Next Generation Reaction Wheels	\$1.5
46	2020	Materials	Next Generation Soldier Protection	\$12.5

Resources

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