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OUTPRODUCING THE CCP: RESTORING AMERICAN MANUFACTURING

Friday, November 20, 2026

House of Representatives,

Select Committee on the Strategic Competition Between

the United States and the Chinese Communist Party,

Washington, D.C.

The committee met, pursuant to call, at 8:29 a.m., in Room 210, Cannon House Office Building, Hon. John Moolenaar [chairman of the committee] presiding.

Chairman Moolenaar. Good morning. The select committee will come to order.

And thank you all for being here. You know, it was -- we don't have votes today. And, you know, a number of members flew back to their district, but I really appreciate the members who are here working hard. And this is such an important topic.

And, as many of you know, the Chinese Communist Party has spent decades executing a deliberate campaign to dominate global manufacturing in the industries that matter most to America's economy and national security. In most of these industries, China is no longer merely competing with the United States. It has surpassed us. This did not happen by market forces. It happened by China's design.

After World War II, the architects of the global trading system faced a basic question: Should a command economy run by an authoritarian government be allowed to benefit from the open markets free nations had built for one another? Washington warned that the Soviet economic system was not compatible with the world trading body. It was one of the most prescient judgments in the history of America trade policy.

When a new century began, America made a different choice and offered a seat at the table to the Chinese Communist Party. Since joining the World Trade Organization in 2001, China has run the same playbook again and again: massive state subsidies, a deliberate buildup of overcapacity, dumping products below cost, bankrupting foreign competitors, consolidating market share, and weaponizing pricing power. The results have been disastrous. American workers and innovators have paid the price and our industrial base has been hollowed out.

The scale of this effort is staggering. In 2019 alone, China spent roughly $248 billion on industrial policy, 1.73 percent of its GDP. The United States spent less than a quarter of that as a share of our economy.

This committee's new bipartisan report "Rigging the Game" documents exactly how industry

after industry has been ruined. In semiconductors, China has poured more than 100 billion into its national chip fund, and the latest phase alone could mobilize over 200 billion more. China is on track to control nearly half of the world's mature-node chip capacity by 2027, the chips that run our cars, our power grid, and our weapons systems.

In aerospace, China has spent an estimated $49 billion propping up its commercial aircraft champion, more than twice the subsidy Airbus received from Europe. In machine tools, the machines that make the machines, China has used state funds and state-owned enterprises to push domestic control of its market from low single digits to over 30 percent in the high-end segment. Biomanufacturing is now dominated by China, with the country producing 70 percent of the world's fermentation output.

China's strategy is a sword and a shield. At home, it eliminates China's dependence on the rest of the world. Abroad, it makes the rest of the world dependent on China and then uses that dependence as leverage. We have seen it with rare earths. We have seen it with solar. If we do nothing, we will see it again and again.

Make no mistake, this is not only an economic fight. Manufacturing capacity and military deterrence are inseparable. China today has roughly 230 times the shipbuilding capacity of the United States, and its commercial and military shipyards share the same resources. In a modern great power conflict, the side that can replace its losses is the side that will win. Right now, that is not us.

The good news is that we can change course. Rebuilding America's industrial base is a cause that unites every American regardless of party. The expert witnesses before us today have built, led, and invested in American manufacturing while competing head-to-head against the Chinese state. We are going to hear what that competition looks like from the inside and what it will take to restore American production in critical industries. Our bipartisan report is the launchpad for what Congress can do to make sure the next generation of American industry is built here at home.

Manufacturing cannot be treated as a relic of the past. Instead, we must recognize Made in America as a foundation of 21st century power that will ensure good-paying jobs for millions of Americans, control of our Nation's destiny, and American leadership of the world for generations to come.

I look forward to hearing from our witness, and I want to recognize the ranking member, Ro Khanna, for his opening statement.

[The statement of Chairman Moolenaar follows:]

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Mr. Khanna. Well, thank you, Mr. Chairman. Since this is one of our last public hearings, I just want to thank you for your leadership of this committee this Congress and your bipartisan leadership. The report that we are putting out today is a testament to your hard work and bipartisan leadership, and I appreciate that.

I want to thank our witnesses for joining us today.

Over this past year, we have been on two tours of de-industrialized communities across our heartland and across the South. We saw the devastation brought about by deindustrialization in this country. This country offshored jobs to China, and we abandoned workers who held them while others built fortunes moving production overseas and putting profits over our country. The result is not just hollowed-out towns. It is the loss of the social fabric and moral fabric in this country.

An America dependent on Beijing for everything from the necessities of daily life to technologies of the future is not an America that will lead the world in the 21st century. Enough is enough.

Last week, this committee released a bipartisan report entitled "Rigging the Game: How China Undermined Western Manufacturing and Hollowed Out American Industry." It says, "helped hollow out." I would just say "hollowed out," but I guess "helped" is certainly a euphemism.

It examines four industries -- biomanufacturing, aerospace, semiconductor, and machine tools -- and shows how the CCP has not played by the rules. Let me give you an example. I was just in the South meeting with textile manufacturers, people who spin the yarn. I said, what about the tariffs on -- the 60 to 70 percent on yarn that we have put on China? They said it doesn't matter. China just eats them because they have a jobs program. They are just hiring these young people, and they just eat the tariff. China is simply not playing fair. They are dumping and having a government compete against industry.

In biomanufacturing, China is subsidizing and prioritizing the sector in a race to supplant American leadership. As a commissioner on the National Security Commission on Emerging Biotech, I am glad this report actually reflects our bipartisan commitment to biomanufacturing. Our analysis should be a call to action to fund our universities, support our innovators, and attract high-skilled talent to the United States.

In aerospace, a report shows how the CCP is pouring unprecedented resources into Comac, China's state-owned answer to Boeing and Airbus. I am pleased that Owen Herrnstadt, a senior leader -- former senior leader at the International Association of Machinists and Aerospace Workers -- is one of our witnesses today. Thank you, Owen.

In semiconductors, China's efforts to outcompete us are no secret. Thanks to Pat Gelsinger's leadership and others, Congress passed the CHIPS Act, and we have made progress onshoring advanced chip production as a result. But China is increasing its dominance in legacy chips, which power everything from cars to electronics. And China is cheating, as we saw with the recent allegations about Nvidia, circumventing our export control laws and trying to steal our chips. If we do not act fast, the CCP will have yet another choke point it can use against us.

And, finally, our report shows how China has ramped up its machine tool industry as America's has slipped away. If American manufacturers depend on Chinese equipment, we have only solved half the problem. The need to reindustrialize the Nation runs much deeper than just for industries. The CCP's Made in China initiative targeted 10 priority high-tech sectors which aim to transition China from a labor-intensive assembler to a global tech leader.

While America has rolled back investment in clean energy, China poured resources into the green economy. Last spring, I visited First Solar's factory in Ohio with their CEO who is here and one of our witnesses. I saw, with the right policies, domestic manufacturing can lower prices, restore jobs, and reinvigorate American leadership.

It is time for Congress to step up in a bipartisan way. If we invest in our workers and

innovators like never before, American manufacturing in hollowed-out communities can prosper again. We can outproduce the CCP. Thank you, and I yield back.

[The statement of Mr. Khanna follows:]

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Chairman Moolenaar. Thank you, Ranking Member.

If any other member wishes to submit a statement for the record, without objection, those statements will be added to the record.

I would like to introduce our witnesses, and I am going to start with -- Mr. Pat Gelsinger is a visionary engineer and values-driven leader with over 45 years of experience shaping Silicon Valley as a CEO, CTO, and technologist. He has played a pivotal role in developing foundational technologies in semiconductors, microprocessors, and industry standards during his time at Intel, EMC, and VMware.

Today, Pat is a general partner at Playground Global, a deep tech venture capital firm managing $1.7 billion in assets. He also serves as executive chair of xLight, a Playground portfolio company advancing free electron lasers, and sits on the board of Gloo, a platform supporting the faith and flourishing ecosystem. In addition, he contributes to several faith-based philanthropies. Pat is also a speaker, author, inventor, and investor as well as a husband and father of four and grandfather of eight. Welcome.

Mr. Mark Widmar was appointed chief executive officer of First Solar in 19- -- or in 2016. He joined the Arizona headquartered company in April of 2011 as chief financial officer. Under Mr. Widmar's leadership, First Solar significantly expanded its manufacturing and research and development footprint in the United States, investing approximately 5 billion in new manufacturing facilities in Ohio, Alabama, Louisiana, and South Carolina, and the largest solar R&D center outside of China located in Perrysburg, Ohio. Welcome.

Mr. Tom O'Leary is the chief executive officer and cofounder of JetZero where he leads the company's mission to bring the all-wing Z4 to commercial aviation. With a career spanning multiple industries -- automotive, technology, and aerospace -- Tom has built a reputation as an entrepreneurial leader at the intersection of advanced technology and mobility. His experience

ranges from scaling start-ups to guiding high-growth teams in some of the most innovative companies of the last two decades. Before launching JetZero, Tom held leadership roles in the automotive and technology sectors, including Autoweb.com, Ford Dealer Connection, eBay Motors, and Tesla. Welcome.

And Mr. Owen Herrnstadt was confirmed by the U.S. Senate in 2022 to be a member of the board of directors of the Export-Import Bank of the United States. He has also served as a chief of staff to the international president and director of trade and globalization at the International Association of Machinists and Aerospace Workers. As the IAM's chief of staff, he assisted in running one of the largest manufacturing and transportation unions in the world. As IAM director of trade and globalization, he developed policy for international trade, economic investment, international labor standards, and human rights matters.

With that, I want to welcome all of our witnesses and thank you for being here this morning.

And, Mr. Gelsinger, you are now recognized for your opening remarks.

STATEMENTS OF PAT GELSINGER, GENERAL PARTNER, PLAYGROUND GLOBAL; MARK WIDMAR, CEO, FIRST SOLAR; TOM O'LEARY, CEO, COFOUNDER, JETZERO; AND OWEN HERRNSTADT, FORMER MEMBER OF THE BOARD OF DIRECTORS AND FORMER CHIEF OF STAFF, THE BOARD OF DIRECTORS OF THE EXPORT-IMPORT BANK OF THE UNITED STATES AND THE INTERNATIONAL ASSOCIATION OF MACHINISTS AND AEROSPACE WORKERS (IAM).

STATEMENT OF PAT GELSINGER

Mr. Gelsinger. Thank you, and good morning. Thank you, Chairman, and thank you to Ranking Member Khanna for having me.

The latest report has demonstrated yet again the unique cross-jurisdictional work of this committee and the extreme value that it brings for driving comprehensive policy solutions, and we need this type of bipartisan leadership to reshore U.S. manufacturing.

In many ways, I have no business being in this chair today. I am a farm kid and a community college graduate from rural Pennsylvania who stumbled upon the tech world after, by some fluke, passing a trade school test with flying colors. I started as a technician, and after many years of hard work, had the privilege to lead two prominent American companies. The fact that someone like me could go from milking cows and cleaning stalls to overseeing the production of high-end chips is a quintessential American story, and I will spend the rest of my career fighting for the industries that embraced me as a farm kid.

I have seen a lot over the course of my career. It was around the time that I started in the industry that China began its foray into the global economy. When you think about America's sheer industrial might during World War II when we transformed automobile factories into weapons

assembly lines, China's experimentation at the time would appear inconsequential. But, as all of us have seen, China made deliberate decisions since joining the WTO to undercut America's manufacturing capacity.

What is most concerning is China has moved well beyond textiles to drones, 5G, EVs, biotech, and semiconductors. If China dominates manufacturing in this field, we will see more economic distortion. We will see those technologies used against us, our allies, and our partners.

Semiconductor manufacturing, my industry, is a great example of both successful industrial strategy and the consequences of offshoring. America invented the transistor and the integrated circuit and the microprocessor that became the foundation of so many technologies today, but America began gradually offshoring manufacturing and operations roles to remain cost-effective. Our short-term financial gains from offshoring created long-term consequences.

The United States produced about 37 percent of semiconductors. Capacity dropped to about 10 percent by 2022 at the time of the CHIPS Act. We are in short supply of skilled domestic manufacturing talent, and our supply chain resiliency is fragile with what the COVID-19 demonstrated to the entire world.

Fortunately, the United States has started to course-correct our offshoring decisions, and I am proud of my personal role in helping to bring the CHIPS and Science Act to fruition, a bipartisan piece of legislation that is proving once again that America can do industrial policy.

According to the Semiconductor Industry Association and Boston Consulting Group, by 2032, the United States is expected to increase its global share of semiconductor manufacturing from 10 to 14 percent in the world's largest growth rate for fab capacity, but more importantly, from zero to 28 percent on leading-edge chips. Without the CHIPS and Science Act, our share would have slipped even further.

I want to emphasize that our goal with reshoring shouldn't be independence. It should be resilience, enough reliable capacity and know-how, working with trusted allies to adapt in a crisis,

just as we did during World War II.

So how do we manufacture in America again? By leveraging automation and robotics. At Playground Global, our investment thesis is simple. We invest in robots such as those made by robust AI, Agility Robotics, that help everyday workers on the manufacturing floor, not to replace them. We are reinventing the factory floor. Matter, one of my Playground's newest companies, is demonstrating that reshoring manufacturing with robotics and automation enables the trifecta: more efficient supply chains, job creation in the United States, and resilience of supply. Productive work environments yield more productive workers and more of them as capacity scales.

To manufacture at scale in the United States, we need to do several things. First, extend the 48D advanced manufacturing tax credits. This is the single most powerful incentive for fab construction, and it expires in just a few weeks. Extending this incentive should be a priority. If America wants strong domestic supply, Congress should also consider expanding it to chip design, materials, and equipment.

Second, capture supply chains before they are built elsewhere. Moving a supply chain, dreadfully hard. Let's build this one where we want to. And, as we think about the next choke points, resiliency are not typically where private capital invests. We need to build supply chains for the future.

Third, protect what we build. We must move swiftly to end DUV machine sales to China. Keep CXMT out of the United States and allied markets and constrain AI chip exports to China. We should also coalesce our allies and partners around a clean, secure supply chain.

Finally, invest in talent. We need everyone from Ph.D.s to fab construction workers and every hard tech master and Ph.D. to see an invitation to stay in the U.S.

In conclusion, we offshored our blue-collar works to keep costs down, but America should not resign itself to this reality. We must remember that we have proven that we know how to implement industrial strategy successfully, and this hearing confirms that we have the political will

and attention. Now we must bring it into action. Thank you very much.

[The statement of Mr. Gelsinger follows:]

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Chairman Moolenaar. Thank you.

Mr. Widmar, you may proceed.

STATEMENT OF MARK WIDMAR

Mr. Widmar. All right. Thank you. Chairman Moolenaar, Ranking Member Khanna, and members of the committee, thank you for the invitation.

I am Mark Widmar, CEO of First Solar, the largest solar technology and manufacturing company in the Western Hemisphere. I want to start by acknowledging this committee's unique role in connecting the dots between national security, economics, and technology that permanent committees' jurisdictional borders kept apart.

At a time when political polarization is easy, this committee has continued to choose the hard work of bipartisanship, as demonstrated by its recent report on how China undermined Western manufacturing and helped hollow out American industry. This committee has made clear that manufacturing capacity and national security are inseparable.

First Solar is here as proof that America can rebuild manufacturing capacity. Since 2023, we have grown our American workforce from 2,700 associates to more than 5,000 workers currently, and we expect to employ approximately 6,500 by 2027, an increase of approximately 140 percent. That growth came as we added a final production facility in South Carolina and three advanced AI-enabled factories in Ohio, Alabama, and Louisiana, demonstrating that high-tech automation and employment can grow together. We didn't invest almost 5 billion in American manufacturing because it was easy. We invested because we believe in the American worker.

That investment rests on technology we own. By 2027, we will have the capacity to build more than 17 gigawatts a year right here in America with zero reliance on Chinese polysilicon, wafer

cells, or equipment. That matters because of who controls the on-off switch. American solar built with American supply chains is electricity that no adversary can interrupt.

As this committee has seen in other strategic sectors, solar built on Chinese supply chains can be switched off by Beijing the moment it decides to use its leverage. Fortunately, our government has a trade-ready toolbox. Backed by enforcement, the best remedies are specific, aimed at a particular national security risk or economic abuse, and applied where there is domestic capacity to build. Section 232 on polysilicon is that kind of action.

On behalf of all of our American workers, I thank President Trump and Secretary Lutnick for the first true acknowledgment that the solar supply chain is a national security issue. A properly enforced Section 232 on polysilicon will create American jobs.

Tax Code safeguards are equally crucial. I thank Congress for the 2025 prohibited foreign entities restrictions and urge Treasury to issue stringent final regulations.

Today, PRC solar companies are slipping just under the ownership thresholds while keeping control of U.S. entities through gamesmanship. Treasury should look at the whole web of dependencies, not just the equity structures. It must examine who owns the equipment, who guarantees the debt, who buys the output, while closely inspecting restructurings made after enactment but before the effective date.

Meanwhile, the U.S. has grown from about 5 gigawatts of module capacity and 2.6 gigawatts of cell capacity in 2021 to more than 60 gigawatts of modules and roughly 36 gigawatts of cells today.

In that same time, First Solar went from two factories and 2 gigawatts to six factories and 17 gigawatts when fully ramped next year. That growth came from industrial strategies that transcend political shifts in administrations: section 201 solar safeguards imposed in 2018 and extended by the next administration; section 301 tariffs on Chinese solar cells and modules implemented in 2018 and strengthened by the next administration; and section 45X credits created in 2022 and preserved through the 2025 reconciliation process with the addition of prohibited foreign entities restrictions.

The lesson is that industrial strategy must be bipartisan. When the rules hold from one administration and Congress to the next, entire markets can grow and domestic manufacturers can invest with certainty in the United States.

Reindustrializing America is a necessary pursuit and will be a multi-decade effort requiring bipartisan, whole-of-government approaches. Federal agencies should coordinate and collaborate. And bipartisan bills that make our policies nimbler to level the playing field -- should advance in the next Congress.

American technology, American factories, American workers, and consistent enforcement of trade laws are not Democratic priorities or Republican ones. They are American ones. I welcome hosting any of you to any one of our factories to meet our American workers and see American ingenuity up close. Thank you, and I welcome your questions.

[The statement of Mr. Widmar follows:]

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Chairman Moolenaar. Thank you very much.

Mr. O'Leary, the floor is yours.

STATEMENT OF TOM O'LEARY

Mr. O'Leary. Chairman Moolenaar, Ranking Member Khanna, and members of the committee, thank you for the invitation.

I am Tom O'Leary. I am a cofounder of JetZero. It is an American aircraft company currently building its factory in Greensboro, North Carolina. We are designing and building the world's first blended-wing body airplane, Z4, which is a dual-use aircraft, a passenger jet for about 250 people that is also a promising military variant for airlift and refueling.

By blending the wings in the body, the plane burns up to 50 percent less fuel than a conventional jet of similar size. It also reshapes the passenger experience, and who doesn't want that?

The argument here is simple. Aerospace is one of the last advanced industries where America still leads China, and that lead will not hold long term without action. We must recognize and address how China is changing the rules of the game. China plays the long game. Billions in subsidies goes to Comac, the Chinese manufacturer. While the results so far are mixed, the conclusion is not that it is a failure. It is that China is learning. No one in 2000 sitting in a conference room in Detroit would have ever said the words, "China will lead the automotive market within 20 years." Here we are today.

The question for this committee is what does China -- what China does with the experience it gains in aerospace and what that means for our national security and technological leadership one to two decades from now. China has spent more than 15 years evaluating blended-wing body

configurations. It has flown subscale blended-wing demonstrators since 2017. Our assessment is that a blended-wing body tanker is also a likely early priority for the PLA Air Force. Whoever industrializes this configuration first wins the lead and the commercial market in gains. Therein lies a distinct capability contributing to an air superiority advantage.

Here is what we in JetZero are doing to ensure America leads. In June, we broke ground on an 8-million square foot assembly campus in Greensboro, North Carolina, a $4.7 billion investment that will create more than 14,500 jobs. Our full-scale demonstrator built with Northrop Grumman, Scaled Composites, flies next year. It exists because of a public-private partnership with the Air Force to build this demonstrator and fly it at full-scale.

Last month, the Hudson Institute in an independent report found that a blended-wing body tanker could carry far more fuel much further than today's fleet. Our current tanker fleet cannot deliver quantity at range. The blended-wing body absolutely can. Who will own this advantage first in the Pacific theater, the United States or China?

Here is the lesson. JetZero got this far by stitching together a Federal contract, private capital, airline commitments, and a very supportive State in North Carolina. That is the resilience of one start-up, not a national strategy. You cannot expect American industry to deliver large-scale, new solutions better than our adversaries and faster to market without coordinated Federal strategies in those industries. This will benefit the United States' economy, our national defense, our leadership in aviation. China does not stitch deals together. It plans and sets a whole policy playbook in motion. I offer on that front three recommendations.

First, name next-generation aerospace technology as a strategic aim in the industrial strategy -- that the industrial strategy report calls for and support it with coordinated interagency planning -- Federal loan programs, especially -- as needed.

Second, bridge demonstrators to production with prototype commitments so that successful military prototypes can compete to be a fleet.

Third, resource the FAA and support certification reform to certify new configurations on a predictable timeline because certification is now a geopolitical tool, and it is critical to stimulate the investment from private capital sources alongside public. My written statement offers further steps on supply chains and research security.

Previous decades saw too much technology invented and developed here in the United States cross the Pacific where it is produced at scale. We in industry and government need to bear the responsibility of making decisions that build our manufacturing capacity in this critical industry, aerospace. Thank you, and I look forward to your questions.

[The statement of Mr. O'Leary follows:]

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Chairman Moolenaar. Thank you.

Now let's turn to Mr. Herrnstadt.

STATEMENT OF OWEN HERRNSTADT

Mr. Herrnstadt. Thank you, Mr. Chairman, Ranking Member, and members of the committee, for the opportunity to appear before you today. It is a very, very important hearing.

My name is Owen Herrnstadt. I am testifying today on my own behalf. U.S. manufacturing is critical to our Nation's economic and physical security and essential for building a sustainable economy based on the jobs of today and the jobs of the future.

According to NIST, manufacturing accounted for 10 percent of U.S. GDP and 9.3 percent of total employment in 2024 to 2025. Manufacturing is a source of highly skilled jobs and very good wages. Investment in manufacturing research and development has contributed significantly to new industries and innovations, some of which are represented on today's panel, and they employ generations of U.S. workers and have made significant and are making significant contributions to our economic health.

Its impact goes well beyond the sector. According to the NAM, for every $1 spent in manufacturing, there is a total impact of $2.69 to the overall U.S. economy.

Now, despite the importance of manufacturing to our Nation's economy, millions of jobs have been lost over the last 50 years. Today, in fact, there are 5 million less manufacturing jobs than there were in 1976. Industries that were once great contributors to our country are just fractions of what they were. As your report "Rigging the Game" indicates, once great industries like machine tool and shipbuilding are just fractions of what they once were, and industries like -- other leading-edge industries like aerospace continue to be offshored. And new industries, like those

associated with renewable energy products that were developed in the U.S., are mostly produced outside the U.S. in countries like China.

While there are many reasons for this decline in manufacturing, including productivity gains and technological innovations, one of the fundamental reasons is that we have yet to adopt a comprehensive, national industrial manufacturing policy. At the same time, the rush to outsource work around the world has left the U.S. dependent on supply chains.

In direct contrast to the U.S., one country that has embraced a powerful manufacturing strategy is China, as documented in the committee's report, and millions of U.S. jobs have been lost to China's aggressive national manufacturing plan. Six years ago, the Economic Policy Institute reported 3.7 million U.S. jobs were lost between 2001 and 2018 due to the U.S. trade deficit with China. With a trade deficit with China that is still over $2 billion, one can only assume that that number has increased.

So China does this through a number of reasons that we have heard about: Subsidies -- you mentioned the $49 billion to Comac -- through other things like the forced transfer of technology and production into it in return for market sales or market access, or through its disrespect for fundamental human rights, which enables it to lower its labor costs beyond what the market would dictate on that.

So, with that, here are five proposals or things to think about. One, of course, the U.S. must adopt a comprehensive manufacturing plan to produce a cohesive and effective strategy to restore the U.S. manufacturing sector. One, develop a coordinated effort to do that, including employment, training, procurement, tax and investment, research and development, financing, et cetera.

Two, consider expanding and strengthening the U.S. Export-Import Bank's Make More in America Initiative into an independent manufacturing investment bank utilizing the potential captured in the introduction of things like the Industrial Bank of America.

Ensure that Buy American and other domestic content requirements actually mean that U.S. workers are supported and that products are actually manufactured here in the U.S. by strengthening domestic content requirements throughout government.

Consider unfair trade actions against China's forced transfer of technology and production, illegal subsidies, and failure to respect human rights. Every effort in this must be made to coordinate with the EU, U.K., and others to curb this.

And, last but not least, efforts to prohibit forced transfers of production in technology should also be made a priority in all trade negotiations with other countries, including the EU and the U.K. If both were to agree, it would go a long way to stemming the tide of transfer and technology to China with respect to industries like aerospace. Thank you very much.

[The statement of Mr. Herrnstadt follows:]

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Chairman Moolenaar. Thank you.

And I want to thank all our witnesses, and now we will turn to member questions.

And I would like to begin with Mr. Gelsinger. Between 2015 and 2023, China accounted for 72 percent of all new mature-node chip capacity built worldwide. Last December, USTR found China's semiconductor practices actionable under section 301 but set the tariff at zero percent until June of 2027. Most Chinese chips, as you know, don't enter the United States as chips. They arrive inside cars, appliances, and electronics.

If we wait until 2027, what does that market look like, and what tools beyond a tariff on bigger chips would actually change the economics for American fabs?

Mr. Gelsinger. Thank you, Chairman. And the data you cite is frightening. And, you know, when you look at many of the underlying elements of that, they have been stockpiling the semiconductor capital required, the equipment to process those. And, given that export policies and things like EUV have prevented them from being leading edge, they have overwhelmed trailing-edge memory, more mature semiconductor technologies.

You know, delaying action on this simply digs a deeper hole for us to recover from. And, as I like to say, supply chains don't move. They sediment. They are very hard to adjust after they have been built in different locations, and China has taken very aggressive actions on the mature nodes.

As I mentioned in my testimony -- and, in my written comments, I comment more on this -- I think we need to take more aggressive actions on older node tools like DUV, you know, technology and not just EUV technology. I do believe that we should be taking more aggressive actions on tariffs and preventing continued market share erosion in these areas.

I do expect that there will be increasing pressure on technology such as memory chips, an area that the worldwide shortage today is causing acute pressure on manufacturers, whether it is cell phones, personal computers, et cetera. So there is great pressure saying, "Well, let's take some of

those chips from China because we do have acute shortages." I believe we must resist those temptations as well.

So I believe there is a broad set of policy things that need to be put in place, and the one you note is just one of several that need to be urgently put into place if we want to continue to protect the semiconductor industry, which is the most important industry for everything else that we do in the world. This one, we must not lose.

Chairman Moolenaar. Thank you.

Mr. Widmar, the -- solar is the clearest case of China's playbook in action: subsidize, overbuild, dump, and consolidate. When the United States imposed trade remedies, Chinese-owned production moved to third countries and kept shipping. Is country of origin the wrong unit of measure? Should our trade remedies and incentives follow who owns and controls a factory rather than where it sits?

Mr. Widmar. Absolutely a great question, and absolutely it should. It makes no sense to us that, if someone has then demonstrated that they are dumping into the U.S. market -- that they should be given a reprieve just by simply moving that capability and capacity to a new jurisdiction. It is the same company. It is the same structure. It is the same ownership. We need to create that type of enforcement such that, if you have been determined once to be in violation, you should then be determined perpetually that you will be violating until proven otherwise. So we need to take a much stronger position around this.

We have, unfortunately, been dealing with this -- we refer to it as the whack-a-mole effect because it has been going on now for about 15 years. Every time an action has been taken, then they just repackage that up and move it to another country.

I was actually on the Senate Finance Committee. I was testifying there about a year and a half ago, and one of the other members on the panel with me -- which is the CEO from Huntsman Chemical -- was asked the question, have you ever taken a trade action? And his answer was, "No

because it takes too long." My response was, "Not only does it take too long; it is never enforced to its fullest extent." So you have a difficult time of just getting the implementation, of getting the level playing field, and addressing the fundamental challenge, but then the enforcement is very challenging and the opportunity for others to game it or to move to another jurisdiction is what they will do next. And so that whole rigmarole of challenging -- if you want to create this -- a growth company that is focused on innovation and focused on manufacturing and creating more U.S. jobs, U.S. supply chain, and economic prosperity, you have to continue to be looking in the rearview mirror because you are never given that opportunity.

You know, our company is now about 20 years old. We just celebrated our 20th year as a public company, and the majority of that time has been, how do we continue to find a way to deal with those around us that aren't playing by the same level-playing-field rules that we should be playing by?

Chairman Moolenaar. Thank you very much.

And now I would like to recognize the ranking member for 5 minutes of questions.

Mr. Khanna. Thank you, Mr. Chairman.

Mr. Herrnstadt, when I was in Dayton, I was at two different manufacturers, one foreign owned. And, in the foreign-owned one, you had no safety conditions. You had workers being abused, yelled at. And, in the domestic one, their workers were really proud and treated well. My view is the difference was a union.

Explain the importance of these jobs being union -- good-paying union jobs and explain also the standards we need to have if we are going to have foreign direct investment and foreign companies setting up shop in the United States to make sure they live up to our culture and our respect for workers.

Mr. Herrnstadt. Yes. Thank you.

Well, first of all, belonging to a union is a fundamental human right recognized in U.N.

treatises, the ILO, and elsewhere. And, belonging to a union, it allows employees to act collectively, to come together, and to negotiate market wages based on what the labor cost will bear. It also puts someone there to make sure that safety and health regulations are followed -- if not even increased on that -- and a number of other benefits.

One of the things that is also critical as we move towards speaking about China is countries that don't respect fundamental human rights don't recognize that. So we need to ensure that when they come here to the U.S. -- that they do indeed that.

But another thing we need to do is make sure that we can trace the rules of origin for parts and components that are coming in so that we know where they are made, especially with China -- and this goes to USMCA and rules of origin and other things like that -- so we can make sure we know exactly where our supply chain is coming from because the last thing we need is for the U.S. only to be an assembly country as opposed to the manufacturing country that built up this great Nation of ours.

Mr. Khanna. Thank you.

Mr. Gelsinger, I appreciate, again, your leadership on a bipartisan basis on the CHIPS Act. I have two questions, and then you can use the remaining time.

We have discussed that one of the things that could have been better about the CHIPS Act is providing some incentive for purchasing the chips. We had a lot of the incentives to produce it, but do we next time, as we do smart industrial policy, need to incentivize retailers, whether they are buying textiles or buying chips, to actually buy the things Americans are producing?

And the second question is, of course, what is in the news with Nvidia. How concerned are you that the company may have broken export control laws? How concerned are you that advanced chips through Singapore went into the hands of China?

Mr. Gelsinger. So, on the first question on purchasing, I view that as one of the tools. And, obviously, if you look at a book like "Chip War" -- right -- you see that the defense community and

their purchasing power actually led to a great deal of the beginnings of the chip industry entirely. And I do think applying, you know, purchasing power is one of the tools available, but it is one of the industrial policy tools.

And, to me, I would say put as many tools in the toolbox as possible and use as many as possible to accomplish the industrial policy objectives. And, to me, this is one that is underused today. And I think, in some cases, it is tariffs. In other cases, it is purchasing. In other cases, it is subsidies. In other cases, it is R&D. Put all the tools in place and use them aggressively.

You know, with respect to Nvidia, obviously, I -- like everyone is somewhat concerned by the news that has emerged in this area. And, as I have managed my career, integrity in business is the commitment to the company, to the shareholders, to the customers, and incredibly important.

I have no information on whether there was or wasn't violations in this case. Of course, it is concerning. I expect it to be investigated thoroughly by the board and others, and I certainly hope that our IP was properly protected.

As I like to think about AI, it is the industrial race of today, right? And we need to protect it, I believe, at three different levels. You know, I think we need to have the underlying technology in semiconductors more aggressively protected. Second, the chips themselves, right? We need to protect the chips. And, finally, we need to protect the models and the uses of those models as well.

I believe we need more aggressive actions at all three levels: how we protect and how we manage our exports, you know; and how we can ensure our policies are executed, you know, globally through our partners; and, most importantly, how we operate here at home with our leadership companies.

Mr. Khanna. Thank you.

Chairman Moolenaar. Thank you very much.

Representative Newhouse.

Mr. Newhouse. Thank you, Mr. Chairman and Mr. Ranking Member. Thanks for putting

together such a fascinating panel here.

I thank all of you gentlemen for being here. I truly think that, listening to all your testimonies, you have kind of summed up -- or encapsulated may be better a word for -- much of the things that we have found over the last couple of years on this committee as we look at the threats that are posed by the CCP. So thank you for helping us kind of put a bow on top of that report that has just come out. So I will try to get as many of you in 5 minutes as possible.

Mr. Gelsinger, I just want to say, like I told you before, you give a farm boy from Washington hope. Maybe when I grow up, I will be as successful as you. But I also advise you feeding cows and cleaning stalls is great experience before coming to Congress. So maybe you have a future in politics as well.

But, just to start with you, Mr. Gelsinger, we have heard a lot about AI over the last -- well, right now, every day. There is a common, I think, perception that advances in this area -- automation, robotics, AI -- are going to have costs. Inevitably, American jobs are at stake here, or at least that is the perception. You have kind of challenged that notion in your testimony.

So could you maybe help us understand a little bit more your perception and highlight how automation can actually create new opportunities while strengthening our domestic manufacturing, as all of you have talked about?

Mr. Gelsinger. Yeah. Every technology cycle that has ever occurred has created jobs, and it has also eliminated jobs, but every single one has created far more jobs than it has eliminated over time. And I believe AI will be identical. It will create tons of new jobs, and it will displace some jobs, and the aggregate -- it will create more jobs.

Imagine there is a manufacturing line in China with low-cost labor in it. That manufacturing line will only come back to the U.S. with economic value, and that will only come because of robotics, automation, and technologies allowing them to return. And, in doing so, we are going to create higher value jobs running farms of robots, you know, managing those capabilities, reshoring supply

chains. And that is what I call the trifecta. It will enable more jobs. It will enable supply chains to be reshored and enable resilience at the same time.

These supply chains will not come back to the U.S. because we want them to. We must create powerful technological and economic reasons for them to return, and I believe AI is the superpower to accomplish exactly that.

Mr. Newhouse. Of course, the fear comes with there is a time for that transition. I am always reminded of the buggy whip manufacturer just as the Model T is coming out. What do we do with those people that are good at making buggy whips, right?

Mr. Gelsinger. Every technology cycle has been more rapid because it builds on the last technology cycles. AI will create jobs more rapidly, and it will displace jobs more rapidly than the prior ones, but I do believe technology is an enabler of efficiencies and new economy and new expansion -- right -- of global wealth. And, if we lead in AI -- which I think is of paramount importance that a democratic Nation like the United States leads in this technology for the world -- I believe we create more economic capacity and jobs for our great Nation.

Mr. Newhouse. Okay. Thank you.

Mr. O'Leary, I would love to see that plane in person. You note in your testimony that aircraft certification has really become kind of a geopolitical tool and you underscore the importance of maintaining our U.S. leadership in setting the global standards. I want to give you an opportunity to maybe expound a little bit on some of the comments you made.

You said certifying new configurations on a timeline that is actually workable. Could you talk about some -- more on the reforms or even more on that of what FAA should be doing to help us maintain this competitiveness in the world?

Mr. O'Leary. Yes. Thank you, Representative Newhouse.

So capital is the number-one requirement of scale, right? When you are looking to build something as big as what we are doing at JetZero -- bring a third major manufacturer to what is now

a global duopoly ahead of China -- I suppose you could call that the third, but from a scale perspective -- you have to get planes through certification. And so therein lies the -- bringing capital in from private sources, certification is looked at as an indeterminant.

So we have -- through present leadership of transportation and the FAA, they have done an amazing job at bringing focus around this particular challenge, but more resources are needed, right? This is really the key. We need to be able to move through at the rate that was normal in the past: 1 to 2 years from a first flight to a certified vehicle. So that is a rate that people can get behind.

So we do have -- we do have focus from the FAA putting us into the AIR-500 group. Fantastic. Funding and making sure that is sustained and that the system is there to support what we are doing -- that is an amazing thing. That is really what is needed.

Mr. Newhouse. Okay. I appreciate that. Well, 5 minutes goes by very quickly. I want to get to you two gentlemen as well, but maybe there will be a second round, Mr. Chairman. Thank you.

Chairman Moolenaar. Thank you.

Representative Bilirakis.

Mr. Bilirakis. Thank you, Mr. Chairman. I appreciate it. Thanks for holding this hearing. I thank the ranking member as well.

This Congress, our committee has highlighted numerous instances of the Chinese Government's campaign to dominate manufacturing at the expense of American industry. We must protect American businesses and the public from this unfair competition, obviously.

I support the chair's efforts to ban Chinese vehicles and will work with him to make sure we can get that effort passed in Congress. We also need to make sure that the United States has the correct domestic policies to promote innovation and manufacturing growth.

The question -- first question is for Mr. Gelsinger. This committee has spent significant effort investigating different ways Chinese ownership and resources filter into shell, American, and

European companies, providing an alternative way to circumvent existing domestic trade protections.

In your current capacity, sir, what screening do you do when looking to invest in new innovative companies, and how does it affect your ultimate decision to invest if you find such a company?

Mr. Gelsinger. Yeah. We thoroughly investigate those questions, you know, both from our limited partners as well as from the companies we choose to pursue. We are seeking the greatest technology companies in the world, but we absolutely do not invest in Chinese companies, and we assure that our funds are free of any Chinese influence to the greatest extent possible.

Mr. Bilirakis. Very good. Thank you.

Mr. O'Leary, I have heard stories of companies that have worked to bring innovation to market only to later have Chinese production demand signaling targeting that same niche in the market. What competition are you currently facing from Chinese companies, and what could the U.S. do better to make sure American innovation doesn't get snuffed out when the Chinese Government eventually decides to fully commit in that market?

Mr. O'Leary. Thank you. Yes. Well, this is an emerging market, right? And so it is -- as you well note, there have been so many technologies, you know, that we have seen where they are invented, developed; the testing happens here; the first products come; and then scale happens overseas.

And so, really, the goal here is to ensure that when we move to the industrialization phase -- that America's leadership, having invented the technology and developed the technology, continues. What we are seeing is that the aerospace sector in China is very actively looking and pursuing this particular technology.

I mean, I think if you just take a step back, though, how do we win? I don't think we win by copying the China playbook. I think we win by working to improve the system that we have, which

is capitalism, and the pillars of capitalism are competition and innovation. And, if you look at where we stand in a global duopoly, we simply don't have those conditions. We have one aircraft manufacturer in the United States of America. We let that happen. We imagined that the Sherman antitrust law did not exist in that particular case.

And we see the result. We see a lack of competition, which leads to a lack of innovation. And that is how we get on top. That is what JetZero represents: new competition, new innovation, new ways to stimulate the supply chain and create a healthy, resilient ecosystem. That is really what JetZero is here to do.

Mr. Bilirakis. Agreed. Thank you very much.

Next question for Mr. Widmar. Your company is a success story where an American company can compete in a market where the Chinese Government has thrown its weight behind your competition. What elements of your company's success do you think could be replicated in different industries, and what domestic policies are the best obstacles to your success?

Mr. Widmar. Thank you. And probably for -- everyone up here would -- probably would agree with the fundamental concept that it has to start with differentiated technology. I think whatever we do in order to compete is we have to have uniqueness in terms of our capabilities around our technology that allows us to compete and out-innovate.

So we are very fortunate that we started with a technology that nobody in the world had ever studied and, today, nobody else has actually been able to replicate. So that has been our core kind of differentiation as we entered and started to compete on the global scale at -- about at the time that, you know, China, as part of its 5-year planning process, made a strategic decision to dominate this industry and basically eviscerate every competitor in the marketplace.

So that was part one. The other one was we were very intentful on not having any of our supply chain going through China, right? So any of our building material components, any of our equipment and tools that we use to manufacture in our factories -- we have none of it sourced

through China, right? It is either here in the U.S. or it is in Europe or certain parts of southeast Asia.

So, making sure that we weren't encumbered by those dependencies and making sure that we wouldn't fall victim of that on-off switch that China could turn on us at any point in time has really been instrumental in doing that.

As it relates to policies that we can continue to focus on, I really do think that we have to make sure that the policies are driven all the way back into the innovation and the technology side. What we are seeing today on some of the policies that have been put in place in the solar industry is people will structure around them, right?

RPTR SINKFIELD

EDTR ZAMORA

[9:30 a.m.]

Mr. Widmar. And so -- and in some cases, in -- their compliant, but they haven't actually changed much of anything. In some cases we have factories here in the U.S. that have a hundred percent of their bill and material, hundred percent of their tools coming from China, largely operated by the Chinese. The equity ownership structure is not China, for the most part. And then they sell to a customer that is a Chinese entity that sells through into the U.S. market. Those things have to just be completely addressed head-on, right, and we can't tolerate that.

And I do appreciate the comment about the capitalistic spirit that we have here in the U.S. But, unfortunately, sometimes that also creates a little bit of an element of greed, right, where people will make decisions where they are not aligned with the spirit of a policy, but China will find a way that they can capitalize and get a return from their perspective.

We have got to get underneath those and make sure this true form in substance and compliance, because if we don't own the technology, if we don't own the supply chain, right, we will never create the economic prosperity and the economic -- and the American jobs that we can.

Mr. Bilirakis. Thank you very much. I appreciate it.

I yield back, Mr. Chairman.

Chairman Moolenaar. Thank you.

Representative Nunn.

Mr. Nunn. Well, thank you, Chairman Moolenaar, for having this committee. I just appreciate the bipartisan spirit and the threat that we are looking at here particularly coming from great power competition. It appears to be on a cusp with China.

So let's be clear about what our manufacturers, our workers, our farmers from guys like Iowa across the board here are facing. We are talking about a deliberate, a state-sponsored economic

strategy designed to undercut America's industry. If we cornered the global markets, it would build dangerous supply chain dependency as they go only through Beijing and its proxies, and it would weaponize those capabilities at a moment's notice.

Advanced manufacturing in my home State, whether it is in agriculture or aerospace, not only is a huge growth opportunity, it is something that already creates 215,000 workers, jobs, and creates $35 billion of our economy, and this is for a State in the middle of the Heartland. When we start talking about the entire Nation, those dependencies become very real for our ability to succeed. This is why I am glad to be able to talk about with you today, not just manufacturing in the United States, but being able to do it from nuts to bolts to completion.

When Beijing dumped subsidized steel on my State, it nearly put one of my local businesses in Des Moines out of business. They were the guys who were working on things like safeguards for trucks, tractors. John Deere is based there.

Ex-Guard, which I just held an event with, was one of these companies on the chopping block. They sold the intellectual property, redesigned the exact same equipment, built it with Chinese steel, and then dumped it through an ally country onto the United States. But for what we have been able to do on things like this committee, we were able to not only stop that, I am happy to say, Ex-Guard is one of the biggest exporters in the world now, and it is made in America. This is a good news story for all of us. However, we know there is much more work to be done.

That is why I have introduced the Neutralizing Unfair Chinese Subsidies Act to confront Beijing's market manipulation head-on and level the playing field across the board for American industry and America's workers. We can't just play defense against China, and that is why I am glad you are here today. We have got to go on offense particularly against the CCP and their actions right here at home.

I would offer three things. First, we need to be able to bring heavy manufacturing back to the United States, particularly in the Heartland. Just a few months ago, Mr. Chair, we were able to

bring Mesabi Metallics to announce a $15 billion steel plant right here in the United States, and I am happy to say in the Hawkeye State. The largest investment in steel and history being made in America.

Second, we are unleashing private capital to scale up defense and industrial manufacturing. This Congress alone, I am proud to have led over 25 amendments to the NDAA to strengthen our industrial base, including provisions signed into law to help unlock nearly $400 billion, a private capital to back up what the taxpayers are already on the hook for, not only producing it here, but being able to defend here.

And also, third, investing in that next generation of skilled labor. I am proud to be working with Democrats across the aisle here on the PARTNER's Act to help students get hands-on experience to learn those really technical skills, whether it is becoming a welder, a plumber, or an electrician, or advanced manufacturing that can take place in America.

Together, we have backed up targeted legislation on this committee, fortifying U.S. markets from Chinese military aggression: The U.S.-Taiwanese Defense Innovation Partnership Act; the PLANT Act, Preventing Lethal Agriculture and National Threats Act; the TRAIN Act, Thwarting Regional Adversaries Invest Now Act; the BRIDGE Act, Build Responsible Infrastructure Development for Global Economy Act. I like acronyms that make sense.

These are things that work for Americans. More importantly, this is the committee that gets things done and has been able to lead on this.

So as we look at this, Mr. O'Leary, I would like to begin with you. You know, you are the chief executive officer of JetZero, and as an Air Force guy, I am going to give you this recce quiz here.

Look, here is the reality we know the Chinese have done in the past.

[Slide.]

Mr. Nunn. Aircraft One, Aircraft Two. Are you familiar with these aircrafts, Mr. O'Leary?

Mr. O'Leary. I am. One is a copy of another.

Mr. Nunn. That is exactly right. The 233, a Russian-made aircraft that was reverse-engineered by the Chinese, now called the J-15. These two together not only look identical, they are identical. The Chinese were able to steal it and reproduce it.

Here is the real hardship. It is not just that they are able to steal the intellectual property, rip it off, and replace it; they are also forging key competents. Just look at this month's Economist alone; in certain areas, they are getting ahead of us. And in key areas they are identifying key components that only they have control over.

So from where you sit, I think, what is the single-most critical piece of our domestic manufacturing base that we need to protect right now so that Beijing can't simply choke it off at a moment's notice?

Mr. O'Leary. Well, unfortunately, it is more than just one thing. I would just bring your attention to the fact that our servers -- you brought up two claims here, one is a copy of another. Our servers get hit millions of times a day from IP addresses inside the PRC. What are we going to do about that?

Mr. Nunn. That is right.

Mr. O'Leary. I think -- the question, I think, is for the committee and the Congress: Why do we allow the PRC to hammer our servers where we are building a critical piece of technology for the future and the industrial -- reindustrialization of our Nation?

We have contacted the FBI. We have had -- you know, we have done the things that we can do. And what we are told is, well, if there is a breach, then report it to us. Okay.

Mr. Nunn. Right.

Mr. O'Leary. Do you think we could take some preventative steps, just some commonsense basics that would say maybe we should do something about the fact? And we are seeing this, right? We are seeing that you are responding to this on chips. Maybe this is a watershed moment where the Nation could focus -- where we could all focus. It is not a finger-pointing exercise. It is

how do we come together and figure out what we can do to make sure that we protect our IP and protect the advantage of the fact that the United States of America is the greatest innovation engine the world has ever seen, let's protect that innovation.

Mr. Nunn. Thank you for the grace, Mr. Chairman. I would just say, I believe strongly this is a bipartisan effort. Let's go on offense here. Let's not constantly be on defense. And whether it is corn seed being stolen out of the ground in Iowa or the advanced manufacturing that we are doing right here in the U.S., we have got not only maintain our league, we have got to make sure that other people don't steal it from us and flood the market with it.

I really appreciate you gentlemen being here today. Thank you. I yield my time.

Chairman Moolenaar. Thank you.

Representative Palmer.

Mr. Palmer. I thank the chairman for inviting me to waive onto the committee. This is an area where I have been working literally for 6 years trying to raise awareness to the vulnerabilities that we have in regard to our dependency on China for process refined critical minerals and particularly rare earth elements. There is not a single major refinery for rare earth elements in the Western Hemisphere.

I think we saw in the spring of 2025 how vulnerable we are when China cut us off from six of the refined rare earth elements, and it had an enormous impact on automobile manufacturing, shutting down car lines in Europe, U.S., and Canada, including the Ford Motor Company plant was shut down, I think, for 3 weeks.

So I think this is a clear national security threat. I think everyone should understand it. We are moving it by applying the axle on the economy and things like that. But I think the Trump administration has taken the right approach here to make this a whole-of-government effort to address this. They have invested over $7 billion. I don't think that is enough.

I don't know how many people are aware that China threatened a full suspension of all rare

earth elements that would have started last December. Had that occurred, it would have threatened 1.5 trade in U.S. economic production as well as our entire military defense manufacturing sector.

I just -- do you think we are doing enough? Is Congress doing enough to address this? And I will begin with you, Mr. O'Leary.

Mr. O'Leary. Representative Palmer, you are referring to critical minerals?

Mr. Palmer. Critical minerals, rare earth elements.

Mr. O'Leary. Yeah. This is important in the aircraft space, avionics, flight controls, the actuation.

Mr. Palmer. Let me stop you right there. We are saying that we need to put $50 billion into upgrading our air traffic control systems. Can we do that without rare earth elements from China?

Mr. O'Leary. No. That is --

Mr. Palmer. That illustrates right there to this committee and to everybody in Congress the national security threat that we are under. Go ahead.

Mr. O'Leary. Well, yeah, there is a lot that is going on. The critical minerals are at the top of the list for the Office of Strategic Capital. You know, that is a place where we look for -- you know, if you are building, you know, manufacturing facilities, looking at the federally backed debt programs like the Office of Strategic Capital, the place where you immediately go to, and what we were told was first priority is critical minerals, and we said we understand.

So I believe that there are things that are happening, but as you say, there is -- we yet to have the production that we need. So are we doing enough? Probably not. But it is still at the top of the list. So it is good and bad.

Mr. Palmer. Yeah. I have been meeting with a number of folks from Europe, from Central America. I really think that this needs to be a not only whole-of-government approach, but we

need a Western Hemisphere approach, a launched Western Hemisphere alliances of soft power alternative to China 5 or 6 years ago as well. And there is a collaborative effort called FORGE, and the intent is to build a secure marketplace with a price for. I think we are going to have to do that. That would be a appropriate use of tariffs in regard to China trying to undermine a new market.

Would you agree with that, Mr. -- I can't see your name down there.

Mr. Gelsinger. Gelsinger.

Mr. Palmer. The guy from the farm.

Mr. Gelsinger. Yeah, thank you. Yeah, farm boy.

My simple answer is yes, but I would encourage us to broaden our aperture to think about all of the friendshores, you know, Australia, Philippines. You know, Australia has lots of good dirt, right, and they are one of the greatest miners and refiners in the world. And I think --

Mr. Palmer. We have a collaborative agreement with Lynas.

Mr. Gelsinger. But, to me, this is of extraordinary priority, right, and obviously it was maybe the most embarrassing aspect, right, in our trade discussions that we have had with China that we had so little progress made on this topic. You know, it is not just the top materials, it is light rare earths, it is heavy rare earths, some things that aren't as rare, critical across all of our industries, including semiconductors, huge dependencies in this area. Absolutely a priority, and I do not believe we are doing enough to accomplish this yet, even with the focus that this administration has put on it.

Mr. Palmer. My time has expired. Thank you, again, Mr. Chairman, for allowing me to waive on. And I will hang around in case you have a second round.

Chairman Moolenaar. Thank you.

Representative Cammack.

Mrs. Cammack. Well, thank you, Chairman Moolenaar and Ranking Member Khanna, and thank you for the opportunity to waive onto the committee today. This is something that so many

of us here on Capitol Hill have been talking about, and now I believe it is time for us to take action.

I do want to commend this committee, seeing as how I am an imposture today, a waive-on, I do want to say a job well done to this committee for their continued bipartisan work examining one of the most consequential challenges that we face in our country, and that is the CCP's deliberate effort to undermine American industrial leadership.

Now, for decades we have led an innovation. I believe that people come from all over the world, not for our IQ, but for our CQ, our creative quotient. We are problem solvers, we are innovators. And I know that that is at risk through a number of different fronts. But we have to assume that innovation is not enough.

If America invents the technology and China manufactures it, then they control the critical inputs and ultimately they determine who has access to it. I know I am saying things that everybody in this room agrees with and understands, but we all understand that this is also a national security issue.

We cannot afford to handicap our own innovators while simultaneously expecting them to out-compete enterprises backed by the full weight of the Chinese Communist Party. Now here is the tricky part. How do we do this without replicating their model? And it is their model that has led to great success for them in this space. So that is where I want to focus my questions today on how we avoid the command and control model the CCP has deployed.

So I will start with you, Mr. Gelsinger, aka farm boy. I appreciate your testimony and particularly your discussion of how the United States invented the semiconductor but ultimately allowed much of its manufacturing capacity to migrate overseas. Now, I think that that illustrates the fundamental problem in our approach to technological competition with China.

So, obviously, they have a model that employs massive state intervention. How do we do this in a way that is true to our capitalist and free market roots that isn't simply just tax credits, right, and incentives?

Mr. Gelsinger. As we mentioned in an earlier, you know, question, I believe we need to put industrial policy objectives out there very clearly and then create as many tools as possible to accomplish that within our free market systems.

You know, I do believe that in the CHIPS Act, the manufacturing credits were a spark that helped to get the CHIPS Act underway. More importantly, the Investment Tax Credit that is set to expire in 41 days, I believe, you know, was even a more powerful tool. The R&D credits that are going into place now I believe are another tool that help to create the tomorrow. I think tariffs are another tool. I think some of the equity investments that have been taken are another tool. But all of these tools should be viewed as a toolbox to accomplish the industrial policy objectives, you know, that we have laid out in the policy of the CHIPS Act in this particular case.

And I think we need similar views of, what are we trying to accomplish, whether that is rare earths, whether that is aerospace, whether that is semiconductors. We need to accomplish those objectives, create as many tools as possible, and then put capable, you know, bipartisan leadership, working public-private partnerships to get those things accomplished. And I am proud that we have made progress in my industry, the semiconductor industry, but we still have an awful long way to go.

And I would also emphasize that, particularly when you are making long-term capital investments, the short-termism of Wall Street works ferociously against it.

Mrs. Cammack. Yes.

Mr. Gelsinger. And these policies need to be consistent over long periods of time. It may take 20 years for a fab to produce positive financial returns. And if policies change in a yearly, right, or 4-year basis, you cannot possibly make the long-term investments that are required to restore these industries. Long-term sustainable policies consistent with our capitalistic and our democratic values and we will win because innovation will rule the day.

Mrs. Cammack. I think you just made a great case for the REINS Act, which is the largest regulatory reform effort in American history that would allow for Congress, not some unelected,

nameless, faceless bureaucrat, to make policy. And I think that that is important we build upon the Chevron case that was recently decided.

But I know that we are running short on time, and I have a number of questions that I want to submit for the record. But I would like to just ask the full panel. In terms of enforcement, do you feel that the United States is doing enough on enforcement when we are talking about Treasury, when we are talking about CFIUS, when we are talking about some of the elements, particularly this administration with tariffs, are we doing enough with enforcement to deter our adversaries like the CCP? And we can just go down the line.

Mr. Widmar. I will take the first, and, absolutely, we are not.

Mrs. Cammack. You are about to come out of your chair.

Mr. Widmar. Yeah, yeah. I mean, if you think about -- just quickly on one. There was a moratorium that was put in place. First, there was a case that was determined that -- rule of law, was determined that products was violating the rule of law and, therefore, there was tariffs that should have been imposed on that. The prior administration then gave a 2-year moratorium to allow that to, basically, ignore the rule of law.

And then now, it has been determined that there is over $60 billion of tariffs that should have been paid -- should have been paid -- that has yet to be collected because they violated even the moratorium for the 2-year period of time. And so that is what is insanity, right? We can't allow this to happen.

First, the determination of rule of law violation. Secondly, then no enforcement, and they are $60 billion that is just waiting to be collected, and it should have been collected in 2024. So we are 2 years past it. And it still has zero hope that we are going to get that money.

Mr. O'Leary. No.

Mr. Herrnstadt. Did I just -- yeah, thank you. So one area where we could really move aggressively is the whole issue of offsets, which is another term really for the transfer of forced

technology and production in return for market access, and it comes out of the defense industry. And the Bureau of Industry and Security does an annual report. I believe their most recent report said that offsets cost the U.S. something like 66,000 U.S. jobs. They use a different terminology for that.

But, primarily, we don't have an offset policy in this country, and it is used in the commercial industry as well. I mean, that is why you can see China pitting Boeing and Airbus against each other for market sales so that they are forced to move some stuff over to China. And we basically relegate this, particularly in the commercial industry, to the private sector.

So we got the private sector negotiating with another region or another country. The Europeans have an offset policy, for example. And we leave our companies to negotiate with really national policies of other countries. And this is something that we could greatly, greatly strengthen. It used to be addressed in a 1992 U.S. civil -- U.S.-EU civil aircraft agreement. I don't know where that is at this point. It dissipated when both sides filed WTO subsidy claims against each other. But when I talk about trade agreements and other things, these are things that we should, you know, work with the EU about, but also step up our own offset policy both in defense and in commercial.

Thank you.

Mrs. Cammack. Excellent. Thank you. I know I am way over time.

Chairman Moolenaar. Yeah. Did we -- Mr. Gelsinger.

Mr. Gelsinger. Yeah. No, we should, you know, but look through at the context of what are our objectives we are trying to achieve and what things are we trying to offset from our adversaries.

Mrs. Cammack. Thank you. And with that, Mr. Chairman, I yield.

Chairman Moolenaar. Thank you.

Mr. Harrigan.

Mr. Harrigan. Thank you, Mr. Chairman. And I am sitting on the opposite side of the dais

today. I decided I would identify as a Democrat. I thought that it would help me skip the line. That didn't prove to be true. Part of me saw my good friend, Ranking Member Khanna, looking very lonely over here, and I decided to provide him some company. And a third part of me just wanted to understand what it felt like to be in the minority. But don't think that is going to last long, good friend.

Thank you, Mr. Chairman and ranking member, for allowing me to waive on today. I certainly appreciate the opportunity. And thank you to all the witnesses for their testimony. This is one of the last true bastions of bipartisanship in Congress where we see the problems and the threats clearly together.

And I would like to ask a question today, but I am going to start my question with a story. And when I was growing up, I had a mentor who was a former Navy fighter pilot -- yes, an Army guy can have a Navy guy as a mentor every now and again. But after his time in service, he flew for the airlines, long-haul 747s, for about three decades, and first for Northwest and then for Delta. And he told me a story many, many years ago that I have never forgotten. And he said, Pat, when I first started flying long-haul over to Shanghai, the terminal floor was dirt, and I was flying American executives to China. And I would stay with them at the hotels overnight, and I would talk to them. And they said, what we do in the United States, they would never, ever be able to do in China. He said, I ended my career flying long-haul back from China to the United States, hauling Chinese executives making investments in the United States, staying in American hotels, and talking to them at night, and hearing them say what we do in China they will never be able to do in the United States.

Today's testimonies have described American and European companies that have been drawn deeper and deeper into Chinese industrial cooperation across critical sectors.

In aviation, for example, it has been noted by this committee that Boeing and Airbus have both been drawn into it with more than 10,000 Boeing aircraft utilizing Chinese components. But China has not just sold into our industries; it has also bought its way in. For example, AVIC, a

Chinese-state defense conglomerate on the Pentagon's 1260H List, has owned serious aircraft since 2011, and until this summer owned Continental Aerospace Technologies, one of the most widely-used piston engine manufacturers in general aviation. That put a PLA-linked parent over a major U.S. airframe maker.

In a company that builds engines and avionics, those deals were struck over a decade ago when Chinese-state capital was welcomed and the technology transfer and supply chain risks were not widely understood.

How -- and this is a question for all, any of the witnesses that would like to answer. How have similar acquisitions affected our ability to out-produce China, in peacetime and in a conflict, when the same factories and suppliers support Chinese commercial and military innovation?

Mr. O'Leary. I am happy to jump in on that one. Thank you, Representative.

There have been others, other manufacturers that have been purchased. You know, I would -- and don't understand why that would be allowed. The Cirrus one is probably the best example of how is this approved in the first place.

It is your story, though, that I have to go back to because that is absolutely the -- it is such a window into what has transpired over the prior decades. I mentioned being in Detroit in 2000. No one would ever have believed that China would become the world's number one automotive manufacturer. The same way, today, people still believe that they -- it is impossible that they would in a couple of decades become the largest or a large aerospace manufacturer, certainly in commercial jets.

We simply have to put our foot on the floor here and go out at full throttle. The way we are going to do that is with advanced manufacturing by building factories, by defying the anecdote. By taking the technologies that exist today -- you know, we are working with Siemens on digital twin, digital thread, advanced robotics, which Mr. Gelsinger has pointed out is hugely important, AI.

And the application of those four things allows us to do a fifth, which is to simulate

manufacturing such that we have produced in simulation thousands of products before we ever turn the factory line on. That is how we are going to transcend, because we want to get beyond the point where the acquisition or that sort of gamesmanship is able to have an effect.

There is one other thing we are going to do, which is look to, not just produce the final assembly in the United States, but to source, eventually, 100 percent of the parts from United States suppliers.

Mr. Herrnstadt. Yeah, just very quickly. You know, skeptics will say that China will never be able to compete with us in terms of aerospace, or even the Europeans. I would remind those skeptics we didn't think Japan would have a heavy aerospace industry either. They now produce the wing for one of our large commercial aircraft. And 50, 60 years ago, no one would have believed that the Europeans would have a large commercial aircraft company that rivals the one in the U.S. as well. So --

Mr. Harrigan. Mr. Chairman, may I have 30 seconds for a yes or no?

Chairman Moolenaar. Yes.

Mr. Harrigan. I appreciate the responses. Does anybody believe, yes or no, that the existing tools that we have, including CFIUS, adequately address Chinese-state defense enterprises that are already inside of our supply chains? Yes or no?

Mr. Widmar. No.

Mr. O'Leary. No.

Mr. Gelsinger. I think it is more the use of the tool than do we have the tools. These are powerful tools. We have to apply them aggressively.

Mr. Herrnstadt. No.

Mr. Harrigan. Thank you, gentlemen.

Thank you, Mr. Chairman. I yield back.

Chairman Moolenaar. Thank you.

Representative Shreve.

Mr. Shreve. Thank you, Chairman. I too am a -- are we called the waivers? I don't serve on this committee. I appreciate the opportunity to jump in today.

And to Mr. Gelsinger, your point at the outset of your remarks, there is great value in the select committee that cuts across the work that so many of us are doing on our own permanent committees. And I appreciate the opportunity to convene and talk about these challenges that the CCP presents our manufacturing economy, our place in the world that cuts across so much of our work.

I am a Representative from Indiana. I live in Indianapolis. We are a manufacturing-intent State. We punch above our weight class. We are a State of a little over 7 million. We have got 525,000 direct manufacturing jobs. These things, they matter mightily in the economy of a State like Indiana, as they would in Mr. Nunn's State in Iowa.

We are heavy in the medical devices, biotech. Eli Lilly is headquartered there. None of the four of you come out of life sciences, pharma, but there are analogs to some of the things that we have been wrestling with talking about today. In pharmaceuticals, the active -- API is active pharmaceutical ingredients -- alarmingly so come from China.

You know, I, as I came into service, was stunned to realize that we don't have the ability to produce -- to onshore produce something like Tylenol or the generic equivalent. Eighty percent of the precursors are coming from China. And as but a for example of the challenges that their economy, their system presents us, there is but one.

Mr. Harrigan's example of the Cirrus parent ownership by the Chinese may be a little more transparent or visible than the APIs in the case of pharmaceuticals.

A question for any of you. Just generally, are there disclosure, transparency requirements that we ought be working across our committees of jurisdiction and over to the regulatory side of our government to make it clear the vulnerabilities that our economy faces as a result of all these key

elements that are owned, controlled, produced by the CCP.

Mr. Herrnstadt. Well, if I could jump in, that is one of the key problems we are having is following this worldwide supply chain and tracking it down. I mean, maybe we can get to the tier-one supplier, possibly the tier-two. But the tier-three and tier-four, it is very difficult. And, you know, that includes the materials, the steel that goes into it.

And in addition to that, other countries have different definitions of this substantial transformation when one part goes into another thing, and then it becomes that thing so that country then says that whole thing comes from that country where it may have parts from China that really get lost through another country. And those are things that we really do need to clamp down on, we need to work with the private sector about, to figure out actually how do we do this in a responsible and accurate fashion.

Mr. Widmar. Can I just add something to that as well? Flip to the other way around, because China is doing that today. Because they are trying to understand how they can get influence on their exports. They want to know, when materials are leaving China, where are they going, what are the applications that they are being used in so they can then use that as strategic leverage in the future.

So you are asking us to do what they are already doing on their side. We absolutely have to do that, and we have to get to the point of driving this all the way down to the lowest possible level to understand those dependencies and then to figure out how do you free yourself from those dependencies.

One of the things that we did at my company was -- it was about the time of the Russian-Ukraine war, we did a kind of strategic mapping of our supply chain and dependencies all the way through to our tool manufacturers of dependency between Ukraine and Russia and just to find out our vulnerabilities. And we did as we mapped the same thing for China so we could understand that as well, so we can continue to move as much as we can, not just tier one, but two tier two and

tier three down to get as much out of China as possible because the vulnerabilities are going to be there and we can't grow our company with those types of vulnerabilities.

Mr. Gelsinger. While I am a semi guy, about a quarter of Playground's portfolio was bio companies. So I have been learning much about your industries and bio.

Today, we are losing a lot of the future of the bio industry because of our regulatory framework. Most of the early phase testing is occurring in other countries around the world, much of that being in China, because their regulatory policies are enabling a lot of those advanced technologies and next-generation bio and molecules to be tested there. And I think the great fear is, is that not only have you lost some of today's supply chains, but you are also losing, as a result, tomorrow's supply chains as well on the next great blockbuster drugs and innovations that occur.

You know, supply chain transparency is a bit of a whack-a-mole, right? You just got to keep at it over and over and over again to be identifying the supply chain risk. And obviously China goes to great expense to obfuscate, right, to their role in that. So to me this is an ever-ending task and, obviously, this is also a critical industry; not as critical as mine, but a very critical industry for humanity.

Mr. Shreve. All right. I appreciate the plain speak and the insight that you have shared with us this morning.

I yield back, Mr. Chairman.

Chairman Moolenaar. Thank you.

Next, I am going to call on Representative Fuller, but, members, what we will do is do a lightning round second. If anyone has an additional question they want to ask, we will do that. But, Representative Fuller.

Mr. Fuller. Chairman Moolenaar, Ranking Member Khanna, thank you so much for allowing me to waive on too. I kind of feel like I got a 10-day contract here in the NBA, so I am pretty excited about that. So I really appreciate it.

I know I am preaching to the choir when I say that we are in a worldwide asymmetric conflict with communism specifically led by the Communist Party of China.

I want to kind of ask the panel a question kind of related to what Representative Harrigan so eloquently put, which was quite shocking to me as an Army officer that he did that, but it was a great story.

Those Chinese executives that are coming over to the United States, they often are buying companies, wholly owned subsidiary companies in Appalachian communities just like mine and across this Nation. And I wanted to ask the panel because I am trying to work through what that means for our national security.

Mr. Herrnstadt, this may be a question to start with you, but I am interested in the panel's input as well. But those wholly owned subsidiaries that are owned by Chinese companies, is that good foreign direct investment or is that a national security threat?

Mr. Herrnstadt. Well, I mean, you know, that is something, I think, for CFIUS to take a very, very close look at on that and to be as transparent as possible. It would be good to know, for example, those investments, are they going to be in U.S. workers and U.S. companies, U.S. communities, and will those promises actually be held true? You know, we have heard of investments, Chinese investments in the U.S., that haven't come out, you know, with big fanfare on that. So there needs to be some sort of control over that, some sort of monitoring over that, and real commitment on that.

But I can't stress enough the issue about CFIUS and a very, very good look at exactly who is controlling that company, what is it doing, what are the long-term effects on it, and then, of course, is it controlled by the CCP, and all of those things.

Mr. Gelsinger. I agree on the comment, it is careful, and that is CFIUS' job to look at this. However, I would also emphasize that, you know, 20 years ago, you know, force transfer, 51 percent ownership were the key topics that troubled -- right, technology, transfer, and manufacturing to

China.

Today, China on many of these areas is the world-class leader. You know, you are no longer competing with somebody who is cheating; you are now competing with somebody who is very good. And in many cases, as they take over companies, they are also bringing world-class manufacturing capabilities back to American shores as well. So I don't think you can answer that question simply, right, because today they have become best on planet in many areas that they are leaders in. They have innovated, they have invested, they are very good, they have top technology, and I think we have to look at them through a much more modern lens.

You know, my next trip to China would probably be number 60 for me. Been there often, seen their plants, seen their manufacturing. They are very good. They may not have gotten there by techniques that are totally inappropriate in the world setting, but today they are very good.

Mr. Widmar. My concern around this is that if they are acquiring an entity here in the U.S. or they are deciding to invest in the U.S., there is probably an ulterior motive for what they are trying to accomplish. And sometimes it may be to create the front end of the factory here but then to bring the back end of the subsidized dump supply chain into the U.S. market, so it is another avenue to get access to our market.

My view of this is let them stay home, right? Let them be -- stay in China. We don't need them here. We got great American companies. We got, you know, entrepreneurial spirits, people that are going to out-innovate. Let's invest in America first.

Mr. O'Leary. Yes. In the context of the question as you presented it, I am bewildered as to why we allow ownership by any communist country for any land or any company in the United States of America. I think this is best categorized as mental inertia. It seemed as a good idea at the time. I think any policy that allows for the CCP to purchase anything in the United States, to me, is puzzling. And until or unless they stop practices of IP theft, which is our primary concern as an emerging technology company, I think it would be great to see action in that direction.

Mr. Fuller. Thank you so much for your answers. I appreciate your candor here today.

And just quickly before I yield back, just want to say, Colonel Dycus, nice to see you, an old colleague and friend, sir.

So, Mr. Chairman, I yield back my time.

Chairman Moolenaar. Thank you.

Okay. We will start the lightning round, if that is all right with you. And I would like to ask each of you briefly. You know, protecting our industries is only half the job. We also have to build. And I would like to hear from each of you, what is the most single important thing Washington can do to promote manufacturing here at home, whether in your industry or across the entire economy? Mr. Gelsinger?

Mr. Gelsinger. Talent, right? And as I say in my testimony, right, every -- you know, half of our masters and Ph.D.s, particularly in hard tech, come from international. An enormous amount of the, right, economic value of our stockmarkets are filled with leaders that came internationally. Every higher education degree should come stapled with a green card and an invitation to do their best work in the United States.

Mr. Widmar. I would say supply chain and enabling of a supply chain. We kind of touched on it a little bit, but as it relates to mining and refining and critical minerals enabling the advanced technologies that we are evolving towards, absolutely have to change the game on that. It is a struggle.

So we actually -- one of the materials we used in our semiconductors is called tellurium of which is a byproduct of the refining of copper, which we partnered with a mine in Kennecott, Utah, with Rio Tinto. And they extract the copper. We get the tellurium, and then we use that in our semiconductor, and then we use that to help power their smelter. But they are one of the few smelters we even have in the U.S. We have got great raw materials. We are not allowed to smelter it here. And it just further constrains and creates dependencies and vulnerabilities. We

need to have that capability here in the U.S. that can enable innovation in manufacturing.

Mr. O'Leary. Agree on supply chain capital is -- JetZero is the example for that. If you look at what we are doing with EXIM Bank looking to do with the Office of Strategic Capital. What these Federal programs do is they stand behind manufacturing and signal to supply chain for big industries like ours that this is something that they can invest their time and their resources in supporting, and that is where these things start to work together.

Mr. Herrnstadt. I think a renewed effort with reshoring, obviously, comes into play. Things like the Made in America initiative at the U.S. Export-Import Bank is crucial because it is directly tied to U.S. jobs. I think an environment -- building a manufacturing environment that is worker-centered -- the ranking member talked about the importance of unions, for example -- that goes a long way to help build a worker-centered program as well on that.

Thank you.

Chairman Moolenaar. All right. Thank you.

I will turn to the ranking member.

Mr. Khanna. Thank you, Mr. Chairman.

This has been a terrific panel. I have really appreciated the insight and learning. I, unfortunately, have stayed about 15 minutes over and have to run, but I want to make sure that all the other members who have a chance that they can ask questions. It is a bipartisan committee. I trust the chairman to do it.

Thank you.

Chairman Moolenaar. Thank you so much. Have a happy Thanksgiving.

Mr. Khanna. Thank you.

Chairman Moolenaar. All right. Representative Newhouse.

Mr. Newhouse. Thank you, Mr. Chairman, Mr. Ranking Member. Tremendous testimonies. Thank you, again.

Of course, Members of Congress, we are looking for specific things we can do. You have all given some great examples. I just wanted to allow you all quickly in the lightning round to expound on that.

What can we do? What can Congress do to help modernize the regulatory review processes so that we can truly get our manufacturing capabilities back and accelerate our domestic capabilities? So what can we do specifically?

Mr. Gelsinger. Forty-one days till 48D expires.

Mr. Newhouse. I wrote that down already. Thank you. Good. Perfect.

Mr. Widmar. It was touched on a little bit as well already I think on the domestic side of it. I do think we need to encourage domestic componentry. So as we make our procurement-led decisions to have domestic content or sources of materials, I think it is absolutely critical to help create that thesis for the investment and create those cycles of innovation.

Then the other one that I would say around that is just the stability of the policy environment. I mean, just because it is really hard from one administration change to the next where we have got to, you know, change -- we think we have a profile of an investment. You know, for us -- you know, an investment for us is about a billion dollars for a new factory. It is going to take about 2 years by the time it is fully built and ramped up. And if we have a change in policies during that timeline, it can completely undermine it.

Mr. O'Leary. I agree and would like to second that. It is consistency in the environment and urgency. You can't create urgency without consistency. And so we look at that across funding authorities, across the Pentagon, and across the FAA, right. The consistency and looking for the system to respond at the speed of business, that is one of the biggest -- the biggest challenges we have. And usually that comes down to funding with regard to regulatory bodies that are between -- you know, for us it is FAA -- but similar to like with pharmaceuticals, right. Those are the things that drive timeframes and cost structures to bring products to market in our business.

Mr. Herrnstadt. I mentioned before about the need for strong domestic content requirements. We certainly have those in terms of buy American States, buy America. And others like the Export-Import Bank have those in terms of financing for many products. But we need to double down on that. We need to make sure that those domestic content requirements are based on common sense. Is the material from the U.S.? Is the manufacturing taking place in the U.S.? We need to make sure those domestic content numbers aren't inflated by some imaginative methodology out there, and we need to make sure that those are very critically strong. That will go a long way in making sure that the billions of dollars the government uses, both in the Federal and in States, that go to procurement actually result in assisting domestic manufacturers who employ U.S. workers and who help our own local communities.

Mr. Newhouse. Thank you, all. Just so you know, one of my efforts is centered around foreign ownership of American farmland, particularly by adversarial countries. And so I agree with the comments that you made on that too.

So thank you, sir.

Chairman Moolenaar. Representative Palmer.

Mr. Palmer. Thank you.

And, Mr. Gelsinger, I grew up on a farm. My dad was a logger. He had about an 8th grade education. I grew up going to the woods and skidding logs with mules.

A couple of things here that I think need to be addressed by Congress and by the private sector. One is the expertise that we need to secure our supply chain of critical minerals and rare earth elements. We are only graduating somewhere between 160 and 300 mining engineers and mineral engineers per year. China is graduating 3- to 4,000.

And the other thing that really concerns me -- and going back to my question about do we -- if China were to cut us off from rare earth elements completely, would we be able to modernize our air traffic control systems is we need to identify all of the single point of failure in our production lines.

All of them. Yes, that is one of the things that keeps me up at night is -- and particularly in the defense industrial base, what are the single points of failure? In chip manufacturing, what are the single points of failure? We need to be very strategic in addressing these things. And you are all welcome do comment on that.

I yield back.

Mr. Gelsinger. I think your comments are spot on in that respect, and I think we are overdue in fixing rare earths, right. It is so critical. But I would also give a note of optimism, a combination. You know, we are entering the greatest period of technological innovation in human history, right? What you have seen over the last 20 years will pale in comparison to what you will see over the next 5 years. And as a result of technological innovation, we will have new rare earths, new mining, new refining, you know, potentials in front of us.

And I do believe, given the heart of this Nation as the innovative nation of the planet of all of history, you know, we have great opportunity to build the next supply chains where we want them. And the combination of innovation is going to be unrivaled over the next two, three decades.

Mr. Palmer. That is a great point. In innovation, we are now developing magnets that can be made without rare earth elements.

Mr. Gelsinger. Correct, as one example.

Mr. Palmer. They have commercial application, but we have to get to the point where they have application to our military defense production.

Mr. Gelsinger. Yep, and our friends. You know, the friendly nations that are aligned with us on these, you know, we have great opportunity in front of us. But we should demand that we see these 40 or so rare earth critical minerals. We should see yearly decays in the requirements from China on every single one of them, and that should be a congressional priority. One by one, every quarter, every year, are we reducing our dependence, and which are the new ones that we are inventing that we are enabling us to create the next great industries with.

Mr. O'Leary. JetZero is looking to be an example to the Nation at scale. Because it is a dual-use aircraft, we believe it is our responsibility to do, I think, exactly what you are saying, which is look at the entire supply chain and find resilience where we can source from the U.S., you know, in a pinch, right? That is basically what it is all about. You need to be able to produce if cut off, right? And so we want to be an example of that, and we believe it is one that is really a no-brainer when you are adopting from a dual-use perspective, and that can be an example to the rest of the country and industries.

Mr. Herrnstadt. I think you have hit on, obviously, something that is absolutely critical is knowing where our supply chain comes from and then taking action to protect it. Even supply chains that have gone to our nearest neighbors, like Mexico, for example, were jeopardized during the pandemic. And we had reports, if I recall correctly, years ago during the pandemic, the defense industry -- the U.S. defense industry was a little jammed up because they couldn't get defense supplies up from Mexico on that. So that is something is that we really, really need to look at.

Thank you.

Mr. Widmar. You know, the only thing I will just add to it, as I alluded to, we went through that exercise and we started about 2019 to do this to make sure that we completely created a domestic supply chain. So our new product that we are making here in the U.S., a hundred percent of that supply chain is here in the U.S.

And I will tell you the other thing that is great about that. So when you look at what we have done, you know, from a direct standpoint, plus the indirect, we have created 40,000 jobs here in the U.S., and that is covering about 4 billion of annual payroll, right? So you need to make the right decisions, you need to think through, you know, your strategic differentiation, and you can't always make decisions on an ROI basis.

And it is hard being a public company. But you have to do what is right and having the greatest impact on the economy, but also giving you the greatest degrees of freedom to grow your

business.

Chairman Moolenaar. All right. Thank you very much.

Representative Cammack.

Mrs. Cammack. I think this has been a great conversation today. And thank you, Mr. Chairman, again for allowing us to go for a second round.

A lot of talk today about supply chains. We have worked through a couple of different options to require blockchain to be used as the digital ledger when it comes to managing oversight over our blockchains, particularly, with foreign aid and through DOW.

Do you see blockchain as the solution to address some of the supply chain verification woes? And if not blockchain, what technology.

And second question would be on CFIUS. We have dealt -- both Representative Palmer and I, we serve on Energy and Commerce and oversee healthcare medical devices, FDA, et cetera. And there have been multiple accounts where medical devices in these companies, they get an investor who buys in, eventually blocks them out, bleeds them dry. There needs to be some reforms made at CFIUS, clearly. I would love to get your input on what that might look like. So blockchain and CFIUS.

Mr. O'Leary. I will start on the blockchain. Concerning the blockchain one, I think that would be fantastic. It is not our focus presently. We have had some of the best companies in the world helping us with those manufacturing technologies that we spoke of before. Deloitte, Nvidia, Amazon, Siemens were all in our hangar this week helping us with that manufacturing simulator. That is our focus right now.

However, I think what you are talking about in terms of blockchain and having that ledger functionality is a fantastic idea, and I am excited to dig into that.

Mr. Gelsinger. On the blockchain one, your blockchain is an awesome technology. However, right, you know, it is an immutable, irrevocable chain, right, you know, which in many cases

is being utilized for, you know, eliminating transparency. And what you need to combine is transparency, auditability, visibility across the supply chain on top of a mechanism like blockchain.

So by itself, it is not a magic bullet because you still require the exposure of everybody down the supply chain and upstream from the supply chain to have visibility, and blockchain can help enable that but only if well-implemented.

Mr. Widmar. I think blockchain could help as well, but I think it is really a matter of getting down into the details. So what we do is actually audit the supply chains of all of our suppliers to understand exactly where the materials are coming from and to ensure that there is no forced labor in the supply chain somewhere or other issues with adversarial nations.

So to me it is -- I think it is a starting point to use something like blockchain, but to me, you got to get into the specifics, and you got to walk it all the way down, not only for your bill of material but for the tools that you are purchasing as well.

Mr. Herrnstadt. You won't hear this too often from anyone in D.C., but I really have no expertise in the question that you mentioned. So --

Mr. Gelsinger. But if I add one comment here. Remember the primary use of blockchain to date has been illicit. You know, the largest majority a ruse case. So, right, just to say it is not a magic bullet that way, right? It is a powerful tool if well applied.

Mrs. Cammack. And then on CFIUS?

Mr. Gelsinger. CFIUS is super important.

Mrs. Cammack. Any modifications? Any suggestions?

Mr. Gelsinger. You know, I think there always is the question of, you know, how well do you utilize that very powerful tool, right, for it? And we know that our adversaries are using their equivalent to CFIUS in much more strategic ways than we are, right? You know, they are implementing industrial policy. You know, we are implementing export policy. And the two, I think, have very different perspectives on how they are applied.

Mrs. Cammack. Okay. Your enthusiasm knows no bounds.

Mr. O'Leary. I mean, from a startup perspective, you think of CFIUS as more of just the thing that you are looking to avoid as opposed to a regulatory tool that can help you. I don't know if that is something that helps with your awareness level. You know, when you are in startup mode, you are looking -- capital is gas in the tank. Money in the bank, gas in the tank, right? And so, you know, what are your constraints on that? And you know that your constraint on CFIUS is, you know, stay below X percent.

Mrs. Cammack. Yeah.

Mr. O'Leary. And so I think greater awareness or maybe keeping that in mind, right, because there is so many -- particularly in defense, there is so much -- we have neo primes, and then we have a whole host, right. And that potentially is something where augmenting CFIUS so that it was more in the fore to prevent. Because -- and, frankly, one of the things that is hard to do when you are raising capital as a startup is to understand, well, where is the LP money? Okay. So I go -- I go to -- I would love to see -- I would love to see more transparency on the, you know, where is the LP money coming from?

In certain cases -- I have been in startup since the late nineties. In some cases, I have been party to finding out after the fact that money was coming into one of the investors from -- right? So it is not a typical thing where people will cry for more regulation, but in this particular case, it would seem appropriate.

Mrs. Cammack. Thank you. Got it.

I yield.

Chairman Moolenaar. All right. Well, thank you very much.

I want to thank all of our witnesses. This has been a fantastic meeting, and we have learned a lot and appreciate your expertise.

To the members, I want to thank you and just say that questions for the record are due 1

week from today.

And without objection, the committee hearing is adjourned.

[The information follows:]

******** COMMITTEE INSERT ********

[Whereupon, at 10:30 a.m., the committee was adjourned.]