Chairman Crapo, Ranking Member Brown, and members of the Committee, on behalf of the Alliance for American Manufacturing (AAM), thank you for the opportunity to testify at today’s hearing on the Threats Posed by State-Owned and State-Supported Enterprises to Public Transportation.

The Alliance for American Manufacturing is a non-profit, non-partisan partnership formed in 2007 by some of America’s leading manufacturers and the United Steelworkers. Our mission is to strengthen American manufacturing and create new private-sector jobs through smart public policies. We believe that an innovative and growing manufacturing base is vital to America’s economic and national security, as well as to providing good jobs for future generations. AAM achieves its mission through research, public education, advocacy, strategic communications, and coalition building around the issues that matter most to America’s manufacturers and workers.

The TIVSA Law is an Important Milestone
For the last two decades, we have seen the destructive impacts of China’s model of state-led capitalism on our domestic manufacturing sector, and the damaging ripple effects on thousands of communities across our nation. Between 2001, when China entered the World Trade Organization (WTO), and 2018, 3.7 million U.S. jobs were lost or displaced because of our massive bilateral trade deficit with China.1 This carnage has been fueled by predatory trade practices and disruptive economic policies, including massive subsidization of state-owned enterprises (SOEs) and other “champion” firms that Beijing has deemed strategically important to their own economic and security interests.

More recently, we have witnessed China’s state-owned and state-supported rolling stock companies threaten legitimate competition in the markets that serve our public transportation system. Backed by extensive government support, including Made in China 2025, China Railway Rolling Stock Corporation (CRRC) and Build Your Dreams (BYD) are at the forefront of China’s assault. Their penetration into our market has been accelerated by open access to taxpayer-financed railcar and electric bus procurements in major U.S. cities. In other words, these firms have penetrated our market with not only Beijing’s backing, but also on the backs of American taxpayers.

China’s subsidies and other governmental support allow CRRC and BYD to underbid the competition, but you get what you pay for. The taxpaying public has received dangerous railcars plagued by undercarriage faults, door malfunctions, and derailment and electric buses experiencing brake pressure issues, door issues, cracked and missing welds compromising the integrity of the buses, malfunctioning wheelchair accessibility, and exposed high voltage cables that created a risk of electrical fire.2

Left unchecked, the toll on U.S. supply chains will be devastating. Because CRRC and BYD’s U.S. assembly operations are a supply line for major rolling stock components produced in China, the jobs of American workers throughout our domestic supply chains are now at risk. A recent MassLive article describes the business model well: “[CRRC’s] cars come to Springfield as unfinished metal shells built in China...Here, workers install all the electronics, interiors, motors and other equipment.” Meanwhile, a city official familiar with BYD’s assembly operations remarked that “the majority, if not all, parts were manufactured in China and shipped to the United States.”

China’s ambitions are sizeable: To establish a substantial foothold into our public transit market as a means of expanding into private sectors such as the freight rail and electric vehicle markets. Jobs, supply chains, innovation, and the security of Americans using our public transportation systems are all at risk. We are also deeply concerned about China’s “military-civil fusion” partnerships, which means that doing business with China’s state-owned and state-supported enterprises directly finances China’s development of its military capabilities and proliferation of its surveillance regime. Technology and data obtained by these firms in the United States is handed directly to the Chinese military and each collaborates with Huawei.

We are grateful that Congress – under your bipartisan leadership – has begun taking action to mitigate this threat. As China’s state-backed firms have sought to avail themselves of U.S. tax dollars to advance Beijing’s broader economic and military interests, your bipartisan leadership led to passage of a version of the Transportation Infrastructure Vehicle Security Act (TIVSA) as part of the fiscal year 2020 National Defense Authorization Act (NDAA). If TIVSA is properly implemented as intended by Congress, CRRC and BYD will no longer have unfettered access to the federal dollars used to procure public transit vehicles. The TIVSA law represents an important milestone in the United States’ policy response to the threat of China’s state-driven gaming of our economy.

Yet, China’s assault on our public transportation infrastructure is not likely to subside and the manufacturing capabilities that underpin America’s public transportation remain at risk. It is necessary for Congress to remain vigilant about the threat that China’s state-owned and state-supported firms continue to pose to American jobs, supply chains and national security:

- We must ensure that the administration implements the TIVSA law without delay and as Congress intended.
- We must reject shortsighted attempts to undermine the TIVSA law.
- We must be better stewards of U.S. tax dollars by closing loopholes and ensuring compliance with applicable Buy America laws.
- We must incentivize the production of electric vehicle batteries and battery cells in the United States.
- And, we must invest in America’s failing infrastructure.

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AAM has a long history of standing up to China’s cheating on trade policy, including its environmental and labor record. For twelve years we have worked with leaders of both parties to push back against dumping, subsidies, currency manipulation, and other unfair trade practices that have cost millions of American workers their jobs over the past two decades. It is unfortunate that some have chosen to attack us for offering fact-based information to policymakers. To date, neither BYD nor CRRC have refuted any facts that AAM or others have laid out about their deep connections to the Chinese government, the Communist Party, the Chinese military, or other state-championed firms like Huawei.

It is the duty of this committee and of Congress to scrutinize how these firms are systematically seeking to destroy the competitive national landscape for U.S. rolling stock manufacturing. We must strive to be good stewards of American tax dollars and promote a competitive, market-based ecosystem of companies that do not benefit from aggressive foreign government support to bankroll anti-competitive behavior.

Again, thank you for the opportunity to testify at today’s hearing. My full testimony has detailed information on CRRC and BYD, along with policy recommendations that we hope you will take into consideration.

**China Railway Rolling Stock Corporation (CRRC)**

**CRRC Threatens U.S. Rail Supply Chains**

In 2014 the Massachusetts Bay Transportation Authority (MBTA) made what we believed to be a shortsighted decision to award a $566 million railcar contract to a Chinese SOE, CNR, that would soon after become CRRC after merging with yet another Chinese state-owned rolling stock firm that was disqualified from the same bidding process. CRRC’s bid was more than $200 million below the next lowest bidder and roughly half that of another established firm. At the time, I wrote to then-Massachusetts Governor Deval Patrick warning that granting this award with tax dollars would reward and enable illicit competition tied to the Chinese government. “As a basic principle of fairness, all bids should play by the same set of market rules and none should be allowed to benefit from the backing of a foreign government... It is cheating, plain and simple, and should not be rewarded using taxpayer dollars,” I wrote. “By making [CRRC’s] entry into the U.S. market possible, this procurement opens the door to unfair, state-owned competition on other rail and transit procurements throughout the United States.”

Regrettably, AAM’s warning was ignored, and the concerns outlined in that letter more than five years ago have become reality. Once MBTA legitimized CRRC with its first major U.S. transit contract, it quickly secured an additional $2 billion in transit rail car contracts in Philadelphia, Los Angeles, and Chicago with low bids that no private-sector competitor could possibly match. In Philadelphia, a competitor was quoted as saying, “I cannot grasp how they are able to do it at that cost.”\(^5\) Compounding the damage, MBTA granted another $277 billion contract to CRRC two years later.

With the financial backing of Beijing, CRRC is systematically working to drive established competitors out of the market and achieve a monopoly in U.S. and global rail car production. But, don’t just take my word for it. In January of 2018, CRRC tweeted, “Following CRRC’s entry to Jamaica, our products are now offered to 104 countries and regions. So far, 83% of all rail products in the world are operated by #CRRC or are CRRC ones. How long will it take for us conquering the remaining 17%?”\(^6\) This tweet was later deleted.


\(^6\) @CRRC_Global, “Following CRRC’s entry to Jamaica, our products are now offered to 104 countries and regions. So far, 83% of all rail products in the world are operated by #CRRC or are CRRC ones. How long will it take for us conquering the remaining 17%?” Twitter, January 11, 2018. [Tweet deleted]
We acknowledge that Boston, Los Angeles, and Chicago secured commitments that final assembly of CRRC railcars be completed locally with additional pledges of support for local workers. That these transit agencies sought to preserve some American jobs is commendable, but their efforts do little to mitigate other overwhelmingly negative impacts to our nation. High-wage jobs throughout the U.S. rail manufacturing supply chain are at risk of being displaced by workers operating under harsh conditions and little pay in China. CRRC’s U.S. assembly plants are a vehicle—both literally and figuratively—for Chinese content to be delivered into the U.S. market.

As of 2015, there were more than 750 companies in at least 39 states that manufacture components for passenger rail and transit rail. This includes: 24 major locomotive, railcar, and streetcar assembly facilities; 188 direct suppliers that manufacture major propulsion, electronics, and body components and systems; and, in the Midwest and Mid-Atlantic alone, 540 additional companies manufacturing sub-components, materials, track and infrastructure, as well as providing repair and re-manufacturing to the industry. All told, the U.S. rail manufacturing sector supports 90,000 jobs. As noted earlier in my testimony, CRRC’s entry into the U.S. transit procurement market is almost assuredly a precursor to penetrating our freight rail market, a sector that not only supports 65,000 manufacturing jobs but is also responsible for moving 40 percent of all goods in the United States.

**Quality and Safety of CRRC Railcars is a Recurring Issue**

In only a limited period, there are already numerous accounts of quality and safety problems with CRRC railcars carrying passengers in Boston. Just this week, MBTA removed CRRC railcars from service after identifying a serious equipment fault. According to authorities, “Inspectors identified a fault with the bolsters which is being corrected to ensure the vehicles are reliable & safe...” According to an MBTA spokeswoman, the bolster is a beam underneath the railcar that allows navigation along turns on the track. This news is even more concerning given that it is third time CRRC railcars have been pulled from this particular train line since delivery. In December 2019, CRRC railcars witnessed odd noise related to a different undercarriage problem and, in September 2019, a malfunction opened doors while the trains were in motion. Worse yet, a CRRC train derailed from its tracks in November 2019.

**CRRC Poses a Serious Security Threat**

CRRC’s rapid ascent raises alarming questions about Beijing’s backdoor access to and operational control over critical technology embedded in our rail infrastructure—such as GPS, sensors and other safety features. Within the TIVSA law, policymakers rejected the possibility that the Washington Metropolitan Area Transit Authority (WMATA) could award its pending procurement for its 8000-series railcar to CRRC. This was a clear statement that Beijing should not have operational control of or access to a major U.S. transit system, opening our critical infrastructure to potential attack or backdoor access to sensitive data and communications of riders. Putting railcars manufactured by a Chinese state-owned firm underneath the Pentagon in Washington, DC or near sensitive locations in New York City or anywhere else in America is a horrible idea.

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As you will hear from other experts on today’s panel, CRRC is Beijing’s national champion in rail and emerging transportation systems. It plays a direct role in China’s military-civil fusion strategy. According to research released by Radarlock in 2019, CRRC is working directly with Beijing to obtain foreign technology, collect sensitive data, and export technologies and information systems that threaten individual and data security, including those of Huawei. CRRC executives wear “dual hats” as corporate and Party leaders, appointed for political purposes.13

**Build Your Dreams (BYD)**

**BYD Wants to Move from Electric Buses to Electric Automobiles in the United States**

In 2013 BYD, short for “Build Your Dreams,” established an electric bus assembly facility in Lancaster, California, signaling its intention to compete for taxpayer-funded transit contracts in U.S. cities. BYD says it has more than 50 public and private customers in the United States, including universities and airports, and has delivered more than 400 electric buses from its California facility. Globally, it claims to have 40,000 electric buses in service14 and is a major producer of rechargeable battery technology in China for various end products.

Like CRRC, BYD’s unparalleled state-subsidies and low-cost, state-backed supply chain of imported Chinese parts and components allow it to undercut competition with impossibly low prices. A recent San Francisco pilot purchase of three electric buses each from BYD and two competitors showed that the Chinese state-supported firm’s price tag came in millions of dollars below the established, market-driven competition.15

Already one of the world’s largest battery producers and the world’s largest electric vehicle company, BYD executives have been outspoken in their plans to one day sell passenger electric vehicles in the United States. In 2008, BYD’s chairman has “boasted of plans to dominate world auto sales by 2025” and, more recently, a BYD executive said the company planned to sell passenger cars in the United States in “roughly 2 to 3 years.” Left unchecked, BYD’s business model would threaten over 5,600 auto parts suppliers spread across the nation, employing 871,000 workers. 16

**BYD Buses Plagued by Quality and Safety Concerns**

BYD’s struggles with quality, consistency, and performance have been well documented. According to Albuquerque officials, bus batteries limited the bus range to 177 miles on a single charge, far short of the 275 miles stipulated in its contract. The buses also experienced serious safety issues, including brake pressure issues, door issues, cracked and missing welds compromising the integrity of the buses, malfunctioning wheelchair accessibility, and exposed high voltage cables that created a risk of electrical fire.17 The city has resorted to legal action against BYD.18

Meanwhile, Los Angeles city transit agency staff “called them ‘unsuitable,’ poorly made and unreliable for more than 100 miles,” the LA Times reported. Buses used in Los Angeles experienced white smoke from a rear wheel, wouldn’t start on a second run, lost charge after just 68 miles, and stalled on the road. Others

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14 BYD website
17 “BYD faces Albuquerque lawsuit: City claims bus firm didn’t live up to deal,” Antelope Valley Press. 08 December 2018.
serving Disney resorts experienced door and air system failures. In Denver, bus doors would not open or close. In Columbia, Maryland, passengers were “jolted by an explosion and a wheel fire.”

BYD is a National Champion of China’s Electric Battery Goals
While BYD is not a “state-owned” company in the same advertised manner as CRRC, it enjoys many of the same benefits and has similar connections to Communist Party Leaders, the China’s military, and firms like Huawei. As the U.S.-China Economic & Security Review Commission has noted, “some private Chinese companies operating in strategic sectors are private only in name, with the Chinese government using an array of measures, including financial support and other incentives, as well as coercion, to influence private business decisions and achieve state goals.”

The Made in China 2025 strategy identified new energy vehicles as one of ten priority sectors for developing indigenous innovation capability, making the sector a priority, high-technology industry important to China’s mid- and long-term growth strategy. BYD is one of China’s “national champions” meaning Beijing believes it has a high potential for growth, innovation, and the ability to advance China’s industrial and other policy goals. “At the heart of BYD’s technology is its batteries...for a broad range of applications – from cell phones and laptops to large-scale, grid-connected energy storage systems,” its website boasts. There are documented cases of BYD’s battery technology being provided to China’s military.

As a national champion, BYD has been the beneficiary of a mix of government support, including a lower corporate tax rate in China, loans from state-owned and policy banks, and generous grants and subsidies. China initiated its government support for new energy vehicles in 2009 targeting battery, hybrid, and fuel cell electric vehicles, including both passenger and commercial vehicles. This support grew over time and, according to a 2019 Bloomberg article, “the company received new energy vehicle subsidies equal to 380 percent of its electric-car sales...[getting] about 8.2 billion yuan ($1.2 billion) from the central government and 4.4 billion yuan [$647 million] from local governments.” This government backing made it possible for BYD to deploy its battery technology into commercial vehicles.

BYD is Closely Aligned with Beijing
While BYD consistently cites Warren Buffett as its largest shareholder, there are several Chinese state-owned investment funds that hold equity interests in BYD or its subsidiaries. Meanwhile, BYD’s leadership have past and present ties to local and national Chinese governments. For instance, BYD’s Chairman and CEO Wang Chuanfu owns a significant stake in the company and was a delegate of the People’s Congress of Shenzhen from 2000 to 2010 and held a position with the city legislature from 2005 to 2015. Much of BYD’s staggering global growth is owed to BYD’s nearly exclusive access to its home market of Shenzhen, a city of twelve million people, where it supplied upwards of 80 percent of the city’s 14,000 electric buses. Zou Fei, an expert of the “Thousand Talents Program” of the Central Committee of the Communist Party of China, was previous managing director within the sovereign wealth fund responsible for managing China’s

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21 “About,” BYD website.
23 Compiled from Government of China Announcements
25 BYD 2017 Annual Report and BYD Financial Releases
26 BYD 2017 Annual Report
28 BYD 2017 Annual Report
Despite its best efforts to brand itself as a private company free of Beijing’s influence, BYD’s direct and active role in China’s military-civil fusion strategy is deeply disturbing and well documented in the 2019 Radarlock Report, “Building the China Dream: BYD & China’s Grand Strategic Offensive.” BYD uses its status as a “private company” to “obtain technology, information, and positioning from the international market, then to carry those back to the CCP and the People’s Liberation Army (PLA).” Meanwhile, its research and development centers are “incubated” in military-civil fusion zones that focus on technology transfer and data sharing. BYD and now-banned Huawei signed a “comprehensive strategic cooperation agreement” in March 2019, solidifying a long-standing, “inseparable” partnership between the two firms. BYD not only benefits from the Made in China 2025 strategy, it is helping to formulate the next iteration: China Standards 2035. This paints a troubling profile of a company with deep ties to the Chinese government and military that is trying to masquerade as a commercial entity.

BYD’s Reliance on Chinese Imports Raises Buy America Compliance Questions

U.S. domestic content preference laws – including the Buy America law applied to transit federal assistance – are an important policy to incentivize domestic capital investment and ensure that American workers supply the materials and components used to build our vehicles and infrastructure. An Albuquerque Inspector General report raised significant questions as to BYD’s Buy America compliance and the degree to which it relies on imported Chinese components and parts for the electric buses it assembles in Lancaster, California. While a BYD official said that “only the frames of the buses were made in China,” the IG report offers sharply different accounts from city inspectors. One person interviewed say that “the majority, if not all, parts were manufactured in China and shipped to the United States.” Another observed that “many of the shipping labels for various components had Chinese characters.” After asking about the status of certain components, including lights and seating, an inspector was told “it’s on the boat” and believed that “everything” originated in China based on responses to questions.

A closer look at BYD’s Buy America compliance calculations in the IG report reveal even more alarming questions, particularly with the way battery power systems consisting of Chinese content are counted.

- BYD met the 65 percent statutory threshold with 53 percent of the total cost of materials attributed to its Power Battery System. Meanwhile, import records show that BYD imports massive quantities of battery equipment, including battery cells, from another BYD subsidiary in China. This foreign content is used to assemble a battery pack that ostensibly qualifies as domestic component for purposes of FTA’s Buy America regulation. This, in turn, means that all other domestic-origin components – such as seats and the farebox – accounted for as little as 18 percent of the total cost of materials in a BYD electric bus.

- An individual interviewed in the Albuquerque IG report indicated that he felt “pressured” to validate [Buy America] compliance by signing documents representing that he personally validated the

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29 BYD 2013 Interim Report
32 The statutory Buy America law for rolling stock procurements funded with Federal Transit Administration (FTA) grants requires that assembly occur in the United States and that domestic content account for a minimum of 65 percent as measured by total material cost, increasing to 70 percent by FY2020.
33 BYD’s U.S. Imports Derived from Shipping Manifests, 2017 and 2018 YTD as of Nov. 28, 2018, Obtained from Panjiva, Inc.
origination of the components. Upon being told that “signing the document was just a ‘formality’ to ensure compliance,” he said that he felt “uncomfortable” signing. He later told the IG “that he felt he was under duress in being pressured to sign the document.”

- Meanwhile, the IG report indicates that BYD provided the “summary of calculations for the percentages of United States made parts” to the auditor tasked with ensuring Buy America compliance. Given that many of BYD’s imported components and parts come from other divisions of BYD, this raises serious questions as to the validity of that information and how thorough of an audit was conducted.

- As further evidence, we direct your attention to BYD’s public comments submitted to the U.S. Trade Representative (USTR) requesting Section 301 tariff relief for storage batteries, air conditioning machines, seats, parts and accessories, and electric vehicles, specifically noting its K9S, K9MC, K7M, and K8S electric bus models. USTR’s General Counsel stated that the “request was denied because the request concerns a product strategically important or related to ‘Made in China 2025’ or other Chinese industrial programs.”

**Policy Recommendations**

AAM appreciates your leadership in securing enactment of the TIVSA law. Yet, China’s assault on our public transportation infrastructure is not likely to subside and the manufacturing capabilities that underpin America’s public transportation remain at risk. There is more work that must be done to mitigate the threat of Chinese state-owned and state-supported companies.

- **Implement TIVSA without Further Delay.** More than two months have now passed since TIVSA enactment and the administration has yet to notify or release guidance to transit agencies. We are concerned that failing to educate transit agencies in a timely manner about how TIVSA impacts their planning decisions leaves an opening for deception and misinformation.

- **Defend and Enhance TIVSA.** Already, there are forces at work to undermine TIVSA. Shortly after enactment, CRRC held a “thank you” event at which speakers discussed plans to indefinitely extend the two-year implementation delay. We urge Congress to reject any attempts to undermine the TIVSA law. Instead, AAM supports efforts to accelerate implementation, educate transit agencies, and enhance the law.

- **Tighten Buy America Laws.** AAM supports making improvements to longstanding Buy America laws by closing loopholes, modernizing rules for battery content, and adding additional teeth to prevent erosion of our supply chains. We find it concerning that companies like BYD are meeting the

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statutory Buy America threshold with electric batteries assembled domestically almost entirely of foreign content, with little to no domestic processing in the United States. It is appropriate, in our view, to recognize that short-term market limitations exist in battery cell production and create a Buy America framework for electric batteries that rewards value added by American workers. We must also ensure that other non-battery components and parts continue to be produced in the United States and are not diminished by virtue of the outsized cost of the electric battery.

- **Develop a Policy Framework for Domestic Battery Production.** Faced with a deeply distorted global market, Congress and the administration should work together to establish a mix of incentives and policies that maximize the utilization of new energy vehicles and expand the supply chain for the domestic production of electric batteries and battery cells.

- **Conduct Buy America Audits.** AAM encourages further scrutiny of both CRRC’s and BYD’s Buy America certifications to ensure compliance. Both companies appear to rely heavily on imported Chinese content and the Albuquerque IG report raised significant questions as to the legitimacy of BYD’s certification.

- **Invest in America’s Failing Infrastructure.** Last, but certainly not least, we encourage you to continue the challenging work of passing a substantial infrastructure investment paired with strong Buy America requirements.

**Conclusion**

We applaud the committee for holding today’s hearing and for your leadership in securing enactment of the TIVSA law. We look forward to working with you to counter the threats to America’s public transportation while strengthening U.S. manufacturing.