AMERICAN SOCIETY OF CIVIL ENGINEERS

Washington Office
101 Constitution Ave., N.W.
Suite 375 East
Washington, D.C. 20001
(202) 789-7850
Fax: (202) 789-7859
Web: http://www.asce.org

Our Nation's Crumbling Infrastructure and The Need for Immediate Action

Hearing

Wednesday, March 6, 2019

Committee on Ways and Means

U.S. House of Representatives

Mr. Gregory E. DiLoreto, P.E., F.ASCE
2013 ASCE President
Chair of the Committee for America's Infrastructure
West Linn, OR

Introduction

Chairman Neal, Ranking Member Brady, and members of the Ways and Means Committee, thank you for inviting me today for this important discussion. My name is Gregory DiLoreto, P.E. and had served in 2013 as President of the American Society of Civil Engineers (ASCE) and currently serve as chair of the Committee on America's infrastructure responsible for ASCE's 2017 Report Card for America's Infrastructure, a leading indicator of the health of America's infrastructure. In my professional career, I was the chief executive officer of the Tualatin Valley Water District, an award-winning water utility located in metropolitan Portland Oregon. As an industry veteran and engineering professional for over 40 years, I continue to be a strategic leader on infrastructure and sustainability on behalf of ASCE's 150,000 civil engineers around the world.

ASCE appreciates the opportunity to discuss the state of our nation's crumbling infrastructure and the need for action. We also want to thank the U.S. House Committee on Ways and Means for examining the current state of our infrastructure systems and the need for strong renewed federal involvement. ASCE is eager to work with the Committee during the 116th Congress to find ways to further improve the state of our nation's infrastructure.

Infrastructure is the foundation that connects the nation's businesses, communities, and people, serves as the backbone to the U.S. economy, and is vital to the nation's public health and welfare.

ASCE has long been an advocate for maintaining and modernizing the nation's infrastructure. ASCE's *2017 Infrastructure Report Card*[1] rated the overall condition of the nation's infrastructure a cumulative grade of "D+," with an investment gap of $2 trillion.

Historically, our nation invested in infrastructure projects with long-term benefits, such as the Hoover Dam and Interstate Highway System, that strengthened the economy while the project was being designed and built, and for generations to come. ASCE has sought to raise awareness of the United States' pressing infrastructure challenges, and some incremental progress has been made since ASCE released its first Infrastructure Report Card in 1998.

These past successes inform us that the next major investment in American infrastructure will require bold vision coupled with thoughtful planning. If we are to achieve lasting progress for our infrastructure, the federal government must commit to not only financing infrastructure programs, but to funding them. This funding must supplement – rather than replace – long-term solutions, regular appropriations, and scheduled reauthorizations. Further, all levels of government and the private sector must do their part to increase this investment in order to restore America's world-class infrastructure.

---

[1] https://www.infrastructurereportcard.org/

<u>Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future</u>

In 2016, ASCE released *Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future*[2]. This economic study analyzed the impact of current infrastructure investment trends on America's GDP, jobs, personal income, and businesses. The study determined that the U.S. is on track to invest only half of what is needed in infrastructure over the next decade. This underinvestment will cause our infrastructure to further degrade, resulting in a loss of 2.5 million jobs, $3.9 trillion in GDP, and $7 trillion in lost business sales by 2025. In addition, poor infrastructure will cost each American family $3,400 a year, which is $9 a day, in personal disposable income. To catch up and address the infrastructure investment gap, we must invest an additional $144 billion each year, which is an average investment of just $3 per day per household. This small investment would put $3,400 back into the wallets of American families each year for a three to one return.

Failure to Act found that our infrastructure challenges are significant, but solvable. Surface transportation categories, including roads, bridges, transit, and commuter rail, face the largest investment gap. We must invest an additional $1.1 trillion throughout this network. Airports require an additional $42 billion to close the funding gap, and inland waterways and ports need $15 billion. It is time to invest in our nation's infrastructure because the longer we wait, the more it will cost.

<u>ASCE's *2017 Infrastructure Report Card*</u>

Every four years, ASCE publishes the Infrastructure Report Card, which grades 16 major infrastructure categories using a simple "A" to "F" school report card format. It is through this format that ASCE educates the public on the current state of our nation's infrastructure system.

<u>Bridges</u>
The nation has 612,677 bridges, and in 2018 54,259, or 8.8%, of our nation's bridges were structurally deficient – or require significant maintenance, rehabilitation, or replacement. In that same year, there were on average 174 million trips across a structurally deficient bridge each day. While the number of bridges in poor condition and also considered structurally deficient is decreasing, ridership over America's bridges is increasing and puts our bridge users in potential risk. The most recent estimate puts the nation's backlog of bridge rehabilitation needs at approximately $120 billion. ASCE's *2017 Infrastructure Report Card* gave our nation's bridges a "C+."

<u>Roads</u>
With over four million miles of roads across the U.S.— 15 lane interstates to residential streets— roads are among the most visible and familiar forms of infrastructure. In 2016, U.S. roads carried people and goods over 3.2 trillion miles – or more than 300 round trips between Earth and Pluto. After a slight dip during the 2008 recession, Americans are driving more, and vehicles miles traveled is at an average growth rate of 1.2% annually over the next 20 years through 2036.

---

[2] Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future. (2016) www.asce.org/failuretoact

Despite the high use and demand, the nation's roads are often crowded, frequently in poor condition, chronically underfunded, and are growing more dangerous. More than two out of every five miles of the nation's urban interstates are congested, and traffic delays cost the country $160 billion in wasted time and fuel in 2014. One out of every five miles of highway pavement is in poor condition and our roads have a significant and increasing backlog of rehabilitation needs. After years of decline, driving on unsafe roads has led to 37,133 fatalities on our nation's roads in 2017. ASCE's *2017 Infrastructure Report Card* gave our nation's roads a "D."

Transit

Transit in America is growing and is adding new lines and systems every year. Yet, the symptoms of overdue maintenance and underinvestment have never been clearer. Despite increasing demand, the nation's transit systems have been chronically underfunded, resulting in aging infrastructure and a $90 billion rehabilitation backlog. While some communities are experiencing a transit boom, many Americans still have inadequate access to public transit. ASCE's *2017 Infrastructure Report Card* gave our nation's transit system a "D-."

Drinking Water and Wastewater

Well-maintained public drinking water and wastewater infrastructure systems are critical for public health and safety as well as economic success, as well as clean water and aquifers. Despite increased efficiency methods and sustainable practices, there is a growing gap between the capital needed to maintain drinking water and wastewater infrastructure and the actual investments made. By 2025, the investment gap for drinking water and wastewater infrastructure systems is estimated to be $105 billion. According to the American Water Works Association, $1 trillion will be needed to maintain and expand drinking water service demands during the next 25 years. ASCE's *2017 Infrastructure Report Card* gave the nation's drinking water infrastructure a grade of "D," and the nation's wastewater infrastructure did not fare much better with a grade of "D+."

Dams and Levees

Our nation's 91,468 dams and over 30,000 miles of levees are critical components of risk reduction and protecting communities, critical infrastructure, and trillions of dollars in property. However, an estimated $80 billion is needed in the next 10 years to maintain and improve the nation's levees, while the Association of State Dam Safety Officials estimates the cost of rehabilitating our nation's federal and non-federal dams to exceed $64 billion, which includes the U.S. Army Corps of Engineers' (USACE) estimate that more than $25 billion will be required to address dam deficiencies for Corps-owned dams. At the current rate of investment, these repairs would take over 50 years to complete. ASCE's *2017 Infrastructure Report Card* gave our nation's dams and levees each a grade of "D."

Inland Waterways

The USACE operates and maintains a vast network of 25,000 miles of inland waterways and 239 locks that support half a million jobs, deliver more than 600 million tons of cargo annually, and serve as the nation's connection to inland and ocean ports and international markets. Barge transport is the most fuel-efficient mode of the transportation of goods; however, with a majority of locks and dams reaching well beyond their 50-year design life—requiring frequent shutdowns for maintenance and repairs, nearly half of all vessels traveling through our inland waterways experience delays. ASCE's *2017 Infrastructure Report Card* gave our nation's inland waterways a grade of "D."

Public Parks

A vast network of infrastructure supports more than seven billion outdoor recreational outings. Americans enjoy park and recreation facilities maintained by entities at all levels of government. At the federal level, the National Park Service, U.S. Forest Service, and USACE are the main providers of park facilities. States and localities provide the bulk of park and recreational facilities that seven in 10 Americans use on a regular basis. National forests and grasslands capture and filter drinking water for 180 million people. America's parks and public lands also support industries such as lodging, restaurants and bars, grocery and convenience stores, and gas stations. Despite the popularity of our public parks, there has been chronic underinvestment. Currently, the National Park Service deferred maintenance is $11.9 billion. ASCE's *2017 Infrastructure Report Card* gave our nation's parks a "D+."

Fundamental Criteria for Future Infrastructure Investment

Failing to close this infrastructure investment gap brings **serious national consequences**.

Our nation is at a crossroads. Deteriorating infrastructure impedes our ability to compete in the thriving global economy, and improvements are necessary to ensure our country is built for the future. While we have made some progress, reversing the trajectory after decades of underinvestment in our infrastructure requires transformative action from Congress, states, infrastructure owners, and the American people. However, there are solutions to fixing our national infrastructure deficit.

If the U.S. is serious about achieving an economy fit for the 21st century, we must take specific steps, starting with increased, long-term, consistent infrastructure investment. Delaying such investment only escalates the costs and risks of our economy. To close the $2 trillion 10-year investment gap and compete against growing economies, we must increase investment from all levels of government and the private sector from 2.5 percent to 3.5 percent of GDP by 2025.

ASCE further believes that all infrastructure programs and projects supported by infrastructure investment legislation must meet the following fundamental criteria:

- Investments must provide substantial, long-term benefits to the public and the economy;
- The cost of a project over its entire life span – including designing, building, operating, and maintaining the infrastructure – must be taken into account;
- Projects should be built sustainably and resiliently; and
- Federal investment should leverage state, local, and private investment, not replace these other critical sources of infrastructure funding.

The 116th Congress should address four major infrastructure priorities at the federal level: fixing the Highway Trust Fund, increasing the cap on the Passenger Facility Charge to modernize our nation's airports, ensuring all funds in the Harbor Maintenance Trust Fund are utilized, and supporting key financing tools such as tax-exempt municipal bonds and advance refunding.

Highway Trust Fund

Fixing the Federal Highway Trust Fund (HTF) is a critical component of any plan to rebuild and modernize our infrastructure. Currently, many of our surface transportation system assets have reached the end of their design life, and in ASCE's *2017 Infrastructure Report Card*, our bridges, rail, road, and transit received grades of "C+," "B," "D," and "D-," respectively. Despite the mediocre grade of "C+" and the dismal grades of "D" and "D-," the federal motor fuels tax rate has not been raised since 1993, and inflation has cut its real value by 40%. As a result of not increasing the federal motor fuels tax, HTF revenues are not keeping pace with demand. It is estimated that by 2029, there will be a collective shortfall of $159 billion.

A growing investment gap of $1.1 trillion over the next ten years has emerged because of this long underinvestment and inadequate support for the HTF. We must close this gap if we hope to both repair and modernize our surface transportation infrastructure systems to be competitive in the 21st century. Our nation's surface transportation investment gap and subpar grades are a result of an outdated federal motor fuels tax and inability to properly fund the HTF as well as our current transportation infrastructure needs.

Our nation's elected leaders must act quickly to address the ever-growing revenue gap. The federal government has historically been the leader in strengthening our surface transportation network. Therefore, ASCE urges Congress to consider the following when seeking solutions to address the highway trust fund shortfall:

- Fix the HTF by increasing the federal motor fuels tax by five cents a year for five years. The current user fee must be raised and tied to inflation to restore its purchasing power. This idea has been led by the U.S. Chamber of Commerce and would provide a much-needed infusion of $394 billion over 10 years to combat the $1.1 trillion investment gap of surface transportation capital needs.

- Establish a broad national pilot program to better understand how a Mileage-Based User Fee (MBUF) could be implemented in the future.

- Include a tax on electric vehicles that would account for their presence on our nation's roads.

Passenger Facility Charge

U.S. airports serve more than two million passengers every day. The aviation industry is marked by technologically advanced and economically efficient aircrafts; however, the associated infrastructure of airports and air traffic control systems is not keeping up. Congestion at airports is increasing and 24 of the top 30 major airports may soon experience "Thanksgiving-peak traffic volume" at least one day every week. In ASCE's *2017 Infrastructure Report Card*, our nation's airports earned a "D" due to a lack of investment in our aviation infrastructure assets.

Because of an outdated, federally mandated cap on how much airports can charge passengers for facility expansion and renovation, airports struggle to keep up with investment needs, creating a $42 billion 10-year funding gap. Raising or eliminating the cap on the Passenger Facility Charge (PFC) will allow airports a much-needed revenue boost and the ability for long-term planning and modernizing of our aviation system for the 21st century.

Harbor Maintenance Trust Fund

The nation's 926 ports support over 23.1 million jobs and are responsible for $4.6 trillion in economic activity. Notably, our ports serve as the gateway through which 99 percent of America's overseas trade passes. To remain competitive in the global market and to accommodate larger vessels, ports have been investing in their facilities and plan to spend over $154 billion from 2016 to 2020 on expansion, modernization, and repair. However, ports are contending with larger container ships and do not always have adequate access to the user-fee funded Harbor Maintenance Trust Fund (HMTF), which would help these facilities prepare for larger vessels. Underinvestment in our nation's ports has resulted in a 25 percent decrease in port productivity in the past 10 years.

ASCE supported the provision in the Water Resources Reform & Development Act (WRRDA) of 2014 designed to encourage the use of the HMTF revenues for its designated purpose. The HMTF's balance currently sits at over $9 billion, but full appropriations of these funds have yet to occur. Once fully funded, it will take five years of complete HMTF funding to dredge and restore channel depths and widths. ASCE urges the Committee to continue implementing the WRRDA 2014 agreement and to increase expenditures accordingly.

Tax-Exempt Municipal Bonds and Advance Refunding

From nearly the beginning of our nation, state and local governments have depended on access to the capital market and issuance of tax-exempt municipal bonds to provide for the nation's infrastructure. From 2007-2017, tax-exempt municipal bond issuance amounted to $3.6 trillion. Because of the tax-exemption on municipal bonds, state and local governments are better able to investment in infrastructure at a smaller cost due to low interest rates and accumulate sustainable financing capital.

Prior to the elimination of advance refunding in H.R. 1, the Tax Cuts and Jobs Act of 2017, this useful financing tool lowered interest rates on outstanding debt from previous bond issuance and provided state and local governments more investment capital. By reducing debt service expenses through advance refunding, state and localities were able to maximize their borrowing capacity for new infrastructure investment. Between 2012-2017, nearly $14 billion had been made available through savings from advance refunding and allowed for high borrowing capacity for state and local governments in new infrastructure investments.

The accumulated revenue and savings from these two key financing options had been used to finance numerous infrastructure projects including transportation, general utilities, electric power, and environmental facilities. Supporting the tax-exempt status of municipal bonds and reinstating advance refunding are part of a multi-investment approach that can help state and local governments make strong infrastructure investments. It is vital that Congress continue to support and reinstate these two financing options in order to shrink our infrastructure investment deficit.

Conclusion: A 21st Century Vision for America's Infrastructure

ASCE thanks the Committee for holding this hearing on a topic that affects the quality of life and livelihood of every American.

In the 21st century, we see an America that thrives because of high quality infrastructure. Infrastructure is the foundation that connects the nation's businesses, communities, and people – driving our economy and improving our quality of life. In order for the U.S. economy to be the most competitive country in the world, we must have a first-class infrastructure system: transport systems that move people and goods efficiently, at a reasonable cost by land, water, and air; transmission systems that deliver reliable, low-cost power from a wide range of energy sources; and water systems that drive industrial processes as well as the daily functions in our homes.

We must commit today to make our vision of the future a reality – an American infrastructure system that is the source of our prosperity. ASCE and its 150,000 members look forward to working with the House Committee on Ways and Means to improve America's infrastructure so that every family, community, and business can thrive.