



# GLOBAL INFRASTRUCTURE — AN OVERVIEW

## What is infrastructure?

Infrastructure is a catalyst that improves living standards and economies globally. Simply defined, infrastructure assets represent a broad mix of the large-scale public and private systems, services and facilities of a country or region that are necessary for economic activity to function. Some examples of infrastructure include water supplies and wastewater treatment, public transportation, rail, roads, bridges, tunnels, ports, airports, telecommunications, power generation and transmission, including renewable energy, and finally, basic social services, such as schools and hospitals.

## Secular trends driving demand

Global demographic trends are driving the need for infrastructure construction in the world's developing economies. China and India have shifted from agrarian to industrial and urban societies. These countries require new, modern infrastructure to facilitate the expansion of industry, the urbanization of their economies, and the effects of continued population growth and an expanding middle class.

In most developed markets, basic infrastructure is worn and dilapidated, having been constructed in the middle of the twentieth century. In these markets, the percentage of gross domestic product (GDP) that is spent on infrastructure has been declining steadily for decades, leaving a crumbling legacy. A vast majority of old infrastructure needs to be either repaired or replaced.

The Organization for Economic Co-operation and Development projects the level of investment needed to meet growing worldwide infrastructure demand will equal 3.5 percent of world GDP through the year 2030 — totaling more than \$55 trillion. The areas in greatest need of investment are the development and modernization of roads, power networks, water systems and telecommunication networks.

*Investing in global infrastructure can enable investors to further diversify their portfolios with an income generating asset class that typically exhibits a low correlation to traditional investments while offering a hedge from inflationary pressures.*

The amount of investment that is required to fix or upgrade existing infrastructure in developed economies is truly stunning, especially when one examines the state of infrastructure in the United States. The American Society of Civil Engineers has estimated that U.S. infrastructure funding needs are \$5.9 trillion over a 10-year period from 2020 to 2029.

## Report card for America's infrastructure

*America's infrastructure currently holds a C- average*



*Source: American Society of Civil Engineers, 2021 Report Card for America's Infrastructure*

Even more disconcerting, funding levels as a share of all federal expenditures are exactly the same as they were more than 20 years ago. The United States' crumbling infrastructure has been well documented over the past few years. The ready supply of capital for projects is dwarfed by the demand for infrastructure, which is driven by the following:

- Population growth
- Urbanization
- Aging infrastructure
- Favorable economic and political climates

## Inflation Reduction Act and the Infrastructure Investment and Jobs Act

Fast forward to today's politics. On August 16, 2022, the Inflation Reduction Act (IRA) was signed into law after a long path through Congress. As it relates to infrastructure, the package includes \$386 billion of climate and energy spending and tax breaks — mainly for new or expanded tax credits to promote clean energy generation, electrification, green technology retrofits for homes and buildings, greater use of clean fuels, environmental conservation, and wider adoption of electric vehicles, among other purposes.

In addition, on August 10, 2021, the U.S. Senate passed the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Act, which the House then passed on November 5, 2021, which extends current transportation authorization legislation and related fuel excise taxes while increasing current funding levels by \$550 billion over the next

10 years. With the addition of \$550 billion in new funding, the overall package provides \$1 trillion over 10 years for infrastructure improvements that include highways, bridges, waterways, transit, airports, the electric grid and broadband.

Among the provisions of the IRA:

- \$161 billion for Clean Electricity Tax Credits
- \$40 billion toward Air Pollution, Hazardous Materials, and Infrastructure
- \$37 billion to Individual Clean Energy Incentives
- \$37 billion for Clean Manufacturing Tax Credits
- \$36 billion to Clean Fuel and Vehicle Tax Credits
- \$35 billion earmarked for Conservation, Rural Development and Forestry
- \$27 billion toward Building Efficiency, Electrification, Transmission, Industrial, DOE Grants and Loans
- \$14 billion in Other Energy and Climate Spending

Source: *Estimated Budgetary Effects of H.R. 5376, the Inflation Reduction Act of 2022 (cbo.gov)*

### The infrastructure opportunity

The global growth dynamics and a resolute need for modernization are expected to continue to drive investment in infrastructure worldwide. Population regions in Latin America, China and India are experiencing infrastructure investment growth over multiple sectors including regulated utilities, transportation and social infrastructure. This growth is necessary for these regions to accommodate their burgeoning populations.

### KEY TAKEAWAYS — THEMES DRIVING OPPORTUNITIES

Long-term infrastructure investment is expected to surround the following themes:

- **Modernization:** Billions of dollars are expected to flow to road, bridge, rail and other modernization projects, with significant implications for businesses that depend on this infrastructure.
- **Decarbonization:** A drive toward a more sustainable economy powered by low-carbon alternatives — including wind, solar, hydropower and nuclear— considered to be in the national interest.
- **Security (focusing on both essential services and information infrastructure):** Cybersecurity is not optional. Upgrades to networks and investing to better secure power, water, and social infrastructure.
- **Digitization:** As digital technologies expand and the number of connected devices increases, the amount of data generated is anticipated to grow exponentially.

**Allocations.** Increased allocations to the infrastructure sector are expected from pension funds and sovereign wealth funds, among other investors, given the risk-adjusted returns available compared to broader fixed income and securities markets.

**Government actions.** During the pandemic, a considerable amount of stimulus was injected into numerous economies around the world. In some jurisdictions, stimulus was directed toward a variety of infrastructure programs to aid economic recovery and broader-based economic multipliers. On the horizon is the potential for asset sales from governments as well as an increased focus on public-private partnerships to help balance their increased financing strategies.

**Transport volumes.** Transportation infrastructure ranges from meaningful recovery trades with transit systems and toll roads to comparatively less volumetric growth from rails and ports.

**Ramped-up renewables.** Across the globe, there is a significant focus on accelerating the growth of renewable energy generation and storage to accelerate the energy transition.

**Carbon and hydrogen.** The price of carbon remains in focus and the continued efforts toward widespread hydrogen utilization are major restructuring themes.

**Data focus.** The 5G and data infrastructure trends remain robust across the globe and tend to offer greater than traditional infrastructure growth rates.

**Natural networks.** Larger scale network owners (electricity, gas, hydrocarbons, etc.) and North American energy infrastructure owners facilitating exports from the continent (across all hydrocarbons) are well positioned for ongoing growth given changing supply-demand patterns.

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