Investment Insights

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Opportunities within U.S. green infrastructure

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– The United States is in the process of revamping its infrastructure with the US$550 billion in new spending approved in 2021

– This provides substantial tailwinds across the U.S. infrastructure value chain, including construction and engineering services, materials providers, equipment manufacturers and owners and operators of infrastructure

– Ongoing changes in energy, mobility and digitalization are introducing new dynamics in the infrastructure sector. Upgrades with environmental sustainability and climate resilience in mind create potential new opportunities for investors

Unprecedented levels of federal spending on infrastructure

Proposals to increase spending on infrastructure has been a common thread in post-pandemic recovery strategies in the developed world, including the European Union, Japan, and Canada. The United States is arguably at the forefront, with the historical Infrastructure Investment and Jobs Act (IIJA) signed into law in November 2021. The US$1.2 trillion bill contains an estimated US$550 billion in new spending above baseline levels. This significant increase in spending has the potential to create multiple opportunities for investors[1].

Governments often look favorably on infrastructure investments, as they have the potential to stimulate economic growth activity and create jobs. A key concept associated with infrastructure spending that compares favorably to other types of government spending is the multiplier effect -- each dollar of government spending has the potential to generate more than one dollar of economic activity.

The IIJA spending spans across every sector of infrastructure, including roads, bridges, public transit, airports and broadband. The bill also includes funding for electric vehicle (EV) charging stations, water infrastructure and resilience projects to address climate change[2], Figure One.

The Inflation Reduction Act (IRA) signed into law in 2022 provides further support to infrastructure investments in the areas of clean energy, transportation and the environment through tax incentives, grants and loans.

For the clean energy sector, the IRA and the IIJA together provide up to US$370 billion in federal funding over the next five to ten years[3], Figure Two.

Infrastructure investments are targeting clean energy transition, reduction of emissions and climate resilience

Important objectives of the new government spending on infrastructure is the creation of so called "sustainable" or "green" infrastructure and integration of environmental sustainability and climate resilience considerations into existing infrastructure. There is a wide range of sub-themes that investors could identify as opportunities, including renewable energy, green fuels, electrification of mobility sector, environmental services and pollution control.

There is a broad range of industries and companies that stand to benefit from the increase in infrastructure investments in the United States, including those involved

[1] The White House (August 2021). Bipartisan Infrastructure Investment and Jobs Act
[2] Brookings (November 2021). America has an infrastructure bill. What happens next?
[3] McKinsey (October 2022). The Inflation Reduction Act: Here's what's in it

in the production of raw materials, heavy equipment, engineering, and construction.

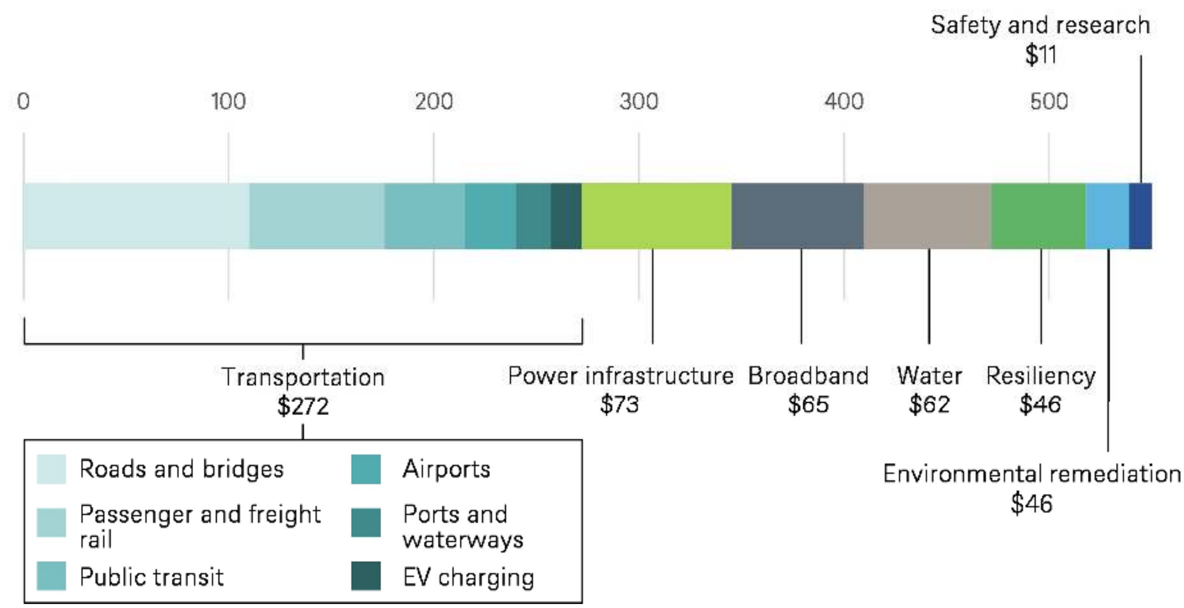
Secondary and tertiary players will also be needed across the spectrum of infrastructure projects, ranging from producers of heavy machinery (graders, excavators, aerial lifts, cranes, pumps and even aerial drones) to advanced manufacturing technology firms specializing in automation, industrial 3D-printing, industrial robotics, digital and communications technology, cyber protection, etc.

Key trends in the infrastructure of the future

The infrastructure sector that previously appeared almost impervious to change is gradually undergoing significant transformation. In addition to the energy transition and climate resilience mentioned above, we believe other new dynamics should be on the radar of investors.

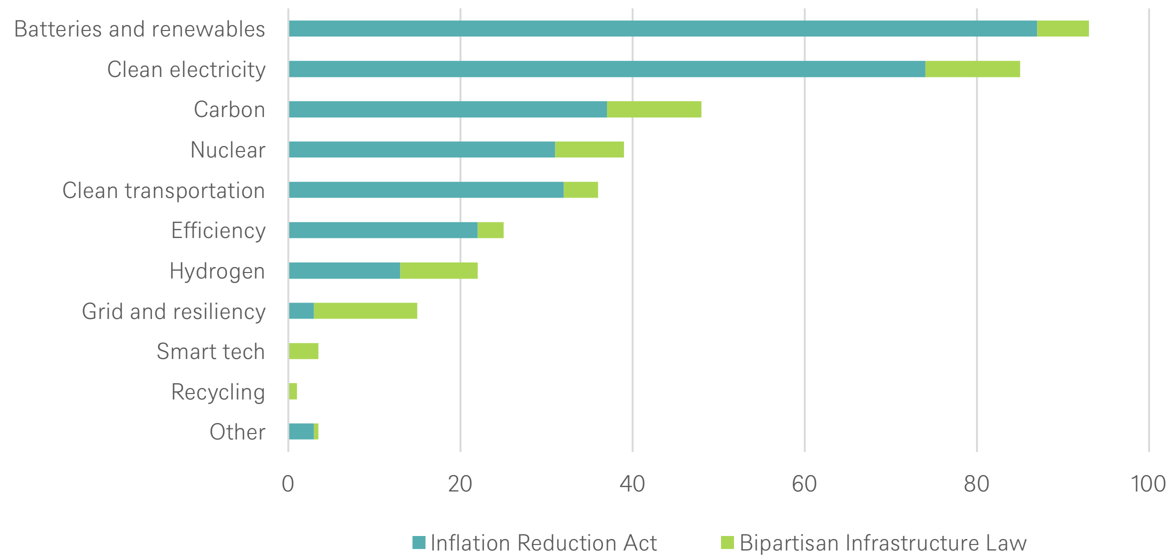
- Digitalization: The integration of digital technologies, such as the Internet of Things (IoT), artificial intelligence (AI) and big data analytics, is transforming the way infrastructure is designed, built and operated. These technologies enable more efficient asset management, real-time monitoring and predictive maintenance. For example, in the electricity sector, digitalization is blurring the distinction between generation and consumption and enables opportunities such as smart demand response, integration of variable renewables, smart charging technologies for EVs and distributed energy sources.
- Cybersecurity: As the physical infrastructure takes on digital features, there will likely be a greater need for cybersecurity precautions.
- Seeking equity and justice: An examination of legacy infrastructure in the U.S. quickly reveals a history of systemic injustice, resulting in disparities in public health and safety outcomes. As a result, we believe there will be a strong focus on ensuring that new infrastructure corrects those inequalities with increasing attention paid to social outcomes and community engagement in infrastructure planning.

Figure One: IIJA has committed US$550 billion in new infrastructure



Source: IIJA, Brookings, DWS as of November 9, 2021.

Figure Two: Energy funding by theme and source (US$ billions)



Source: IIJA, IRA, McKinsey, DWS as of October 24, 2022.

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