The Cost of Doing Nothing

AS THE U.S. CONGRESS GRAPPLES FOR SOLUTIONS TO THE ECONOMIC CRISIS, IT IS CRITICAL to recognize that rebuilding and modernizing infrastructure will be a key driver of economic growth. Recent reports issued by the American Society of Civil Engineers (ASCE),* the Urban Land Institute,† and Building America’s Future‡ have described the deterioration of the nation’s energy, water, and transportation infrastructure. This week, ASCE convenes its annual meeting, gathering international scientists, engineers, policy-makers, and educators to share sustainable solutions across a broad spectrum of concerns in the natural and built environment. Key among the discussions will be the role of scientists and engineers in developing effective public policy, helping to produce an infrastructure that incorporates new materials, technologies, and strategies to improve environmental and social well-being.

When the ASCE issued its 2009 Report Card for America’s Infrastructure, it gave the cumulative grade of “D” to the condition and performance of 15 of the country’s infrastructure systems.* Among the worst were roads and drinking water. The United States not only loses about seven billion gallons of clean drinking water every day due to leaking water systems, but pipe failures and resulting floods have collapsed roads, destroyed homes, and endangered people. It would require an estimated $2.2 trillion over 5 years to raise the grade for all 15 infrastructure systems to an acceptable level. Sadly, the situation has not changed since the report was published. Earlier this year, the ASCE’s report Failure to Act, The Economic Impact of Current Investment Trends in Surface Transportation Infrastructure§ determined that the deficient surface transportation infrastructure alone will cost U.S. businesses an added $430 billion (cumulative to 2020) in transportation costs. By 2020, it is projected that exports will be $28 billion lower, 70,000 jobs will be lost, households will lose more than $7000 in personal income, and the country’s gross domestic product will take a hit of $897 billion. Businesses will need to divert increasing portions of income to pay for transportation delays, wasting money that could instead be invested in innovation. Nearly all sectors will suffer, but those associated with technology and innovation would probably be the hardest hit.

To meet the many infrastructure challenges, more financing is needed. Now that the American Jobs Act has failed to pass Congress, there is discussion of breaking the bill into pieces that should be easier to pass. The proposed act includes $50 billion to modernize road, rail, and air transportation systems, and it would establish a National Infrastructure Bank to leverage public and private capital toward these endeavors. This level of priority and investment is needed, or the United States will continue its downward slide. Indeed, this year’s report from the Urban Land Institute warns that the United States has fallen behind Brazil, China, and India in bolstering transportation, water, and sewage infrastructure.†

Promoting a more sustainable and resilient infrastructure must also be part of this conversation. Improved design and construction standards to withstand extreme conditions will require further R&D. Climate change and environmental preservation also require innovative infrastructure designs. Research is needed to determine the best ways to expand power generation and transmission. And the growing demands for information technology mean that underground utilities must be carefully planned.

Infrastructure investments provide an opportunity to improve the economy in the short term by creating jobs, while also driving the long-term growth needed to compete in the global marketplace. Although repairing and modernizing the country’s infrastructure may seem daunting in lean times, the cost of doing nothing will be exponentially greater.

― Kathy Caldwell

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Editor's Summary

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