

Bond Case Briefs

Municipal Finance Law Since 1971

The Old, Dirty, Creaky U.S. Electric Grid Would Cost \$5 Trillion to Replace. Where Should Infrastructure Spending Go?

The American Society of Civil Engineers just gave the entire energy infrastructure a barely passing grade of D+

The electric grid is an amazing integrated system of machines spanning an entire continent. The National Academy of Engineering has called it one of the greatest engineering achievements of the 20th century.

But it is also expensive. By my analysis, the current (depreciated) value of the U.S. electric grid, comprising power plants, wires, transformers and poles, is roughly US\$1.5 to \$2 trillion. To replace it would cost almost \$5 trillion.

That means the U.S. electric infrastructure, which already contains trillions of dollars of sunk capital, will soon need significant ongoing investment just to keep things the way they are. A power plant built during the rapid expansion of the power sector in the decades after World War II is now 40 years old or older, long paid off, and likely needs to be replaced. In fact, the American Society of Civil Engineers just gave the entire energy infrastructure a barely passing grade of D+.

The current administration has vowed to invest heavily in infrastructure, which raises a number of questions with regard to the electric system: What should the energy grid of the future look like? How do we achieve a low-carbon energy supply? What will it cost?

Infrastructure seems to be an issue that can gather support from both sides of the aisle. But to make good decisions on spending, we need first to understand the value of the existing grid.

[Continue reading.](#)

JOSHUA D. RHODES, THE CONVERSATION