

# THE \$64 BILLION QUESTION

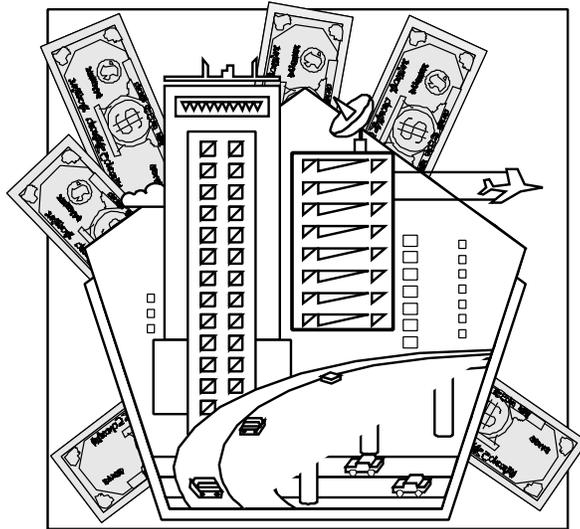
## WISCONSIN'S LOOMING INFRASTRUCTURE COSTS

PETE MILLARD

The next twenty years promise to be a boon for Wisconsin's construction industry. The state's roads, bridges, airports, schools, power plants, brown-field industrial sites, drinking water systems and dams are suffering from neglect and will require tens of billions of dollars in new investment.

A panel of twelve civil engineers has studied all fifty states as part of a national report card and is raising red flags about the deteriorating condition of the nation's basic infrastructure. In Wisconsin, 25 percent of the urban freeways are congested, 26 percent of the state's roads are deemed in poor or mediocre condition, 19 percent of the bridges are functionally obsolete and 60 percent of the state's public schools have at least one unsatisfactory environmental condition.

There are other problem spots that will demand billions of dollars in new investment. Growing electricity demand of 3 percent a year and more than ten years of ignoring energy infrastructure investments places the state in an unreliable power-supply position that can only be corrected by spending billions on new plants and transmission lines.



The infrastructure report, released in late 2003 from the American Society of Civil Engineers (ASCE), points out that Wisconsin needs to spend more than \$64 billion over the next two decades to upgrade its transportation, school, water and energy systems. Nationally, the bill for improving critical infrastructure tops \$1.6 trillion. The trends working against

efforts to raise infrastructure conditions to acceptable levels include state and local budget crises and federal programs that fall short of meeting the demands of infrastructure maintenance, said Thomas Jackson, a civil engineer and president of ASCE who is based in Washington, D.C.

The problems that contributed to the overburdened infrastructure include population growth, voter opposition to new projects, and the continuing deterioration of the nation's aging system, said Jackson. To further complicate matters, the threat of possible terrorist attacks on the nation's infrastructure has diverted hundreds of millions of dollars from maintenance and growth funding to implementation security measures.

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## Roads and Bridges

The work needed for Wisconsin's roads and bridges is by far the largest expenditure facing state citizens in the coming years. According to the Wisconsin State Highway Plan 2020 technical report, which was the basis for the ASCE road and bridges analysis, the Department of Transportation (DOT) estimates there are funding requirements of \$26.1 billion to achieve safety and traffic improvements. New power plants, high-voltage transmission lines and local distribution networks will cost utility ratepayers up to \$15 billion over the next twenty years, according to power company and Wisconsin Public Service Commission (PSC) energy assessments. A third huge category is brownfield industrial sites that have sat idle for decades and could cost state taxpayers up to \$15 billion to clean up. Wisconsin's drinking water infrastructure, which received an above average grade from ASCE, needs \$3.1 billion in improvements over twenty years. Additionally, wastewater treatment facilities will require \$3.35 billion of new funding and schools will require \$1.6 billion. Wisconsin's 143 airports will need \$1.1 billion or about \$51.5 million a year for twenty years to maintain safe operating standards.

Construction industry executives understand there is a looming problem and are lobbying state and federal officials to not only recognize the problem, but to come up with an action plan to make intelligent investments. From a jobs and economic-development standpoint, Wisconsin's elected officials would be wise to find new funding sources for the state's infrastructure, said Larry Lunda, president of Lunda Corporation, a Black River Falls road-and-bridge-building company. "If we keep ignoring the condition of our infrastructure, it's going to be a lot more expensive in twenty years than if we incrementally improved our basic infrastructure," said Lunda.

The Wisconsin State Highway Plan 2020 estimates that roads alone will require \$22.3 billion of new spending over twenty years. Bridges will require an additional \$3.8 billion, of which \$2.8 billion of bridge work will be

earmarked for southeast Wisconsin. The total vehicle miles traveled on state highways between 1982 and 1997 has increased 60 percent while the system's total lane mileage increased by only 5 percent, according to DOT. Truck traffic over the same period has increased 11 percent, putting even more pressure on the highways.

As for bridges, there are 13,429 highway bridges in Wisconsin and 20 percent are considered deficient. Based on data from the Wisconsin State Highway Plan 2020, 7 percent of the 4,812 bridges that are part of the state trunk highway systems are eligible for replacement or rehabilitation. Based on criteria established by the Federal Highway Administration, ASCE estimates that 23 percent of locally maintained bridges are deficient. ASCE estimates that total funding of bridges over the next twenty years should be \$240 million per year, which is 30 percent more than the current funding level.

The Wisconsin Department of Transportation does not dispute the ASCE estimates of what is required to upgrade the state's transportation infrastructure. However, a DOT spokesman said it is not likely the DOT will be able to come up with more transportation funds without federal government assistance.

The Transportation Development Association of Wisconsin is one of several professional associations pressing state lawmakers about the need to increase funding for infrastructure improvements and expansion. "One of the core purposes of government is to provide the framework for business to flourish," said Bob Cook, executive director of the Transportation Development Association. "Business development and growth in Wisconsin will suffer if elected officials continue to ignore infrastructure improvements," added Cook. Wisconsin transportation, water and energy systems have not been maintained, let alone updated, to supply ever-increasing demands, he said.

"As a society, we have to figure out how to handle payments to rebuild infrastructure in

the future,” said Rick Schmidt, a vice president of Payne & Dolan Inc., Waukesha. “We risk damaging the economy in the future by ignoring the problem.”

To alleviate funding problems for expanding the nation’s Interstate Highway System, the federal government is considering a plan to collect tolls on interstates. The U.S. House of Representatives recently approved its version of the six-year transportation bill with an amendment from Minnesota Republican U.S. Representative Mark Kennedy allowing states to use tolls to pay for some building programs. If Kennedy’s amendment becomes part of the final transportation bill, which is now under negotiation in the House and Senate, the federal government would end its ban on tolls being collected on the interstate system.

The Senate transportation bill has its own toll authority language and President George W. Bush’s transportation bill proposal also includes a plan for collecting tolls to pay for interstate expansion. All the toll concepts are gaining political momentum because they are viewed as alternatives to raising gas taxes, which Bush has promised to veto if they are part of the new transportation bill. Wisconsin currently has the second highest gas taxes in the nation.

Milwaukee-based transportation consultant Kevin Soucie and nationally known toll road advocate Robert Poole published a report for the Wisconsin Policy Research Institute in late 2002 suggesting that tolls would be the best way to fund the reconstruction of the \$810 million reconstruction of the Marquette Interchange in downtown Milwaukee.

“It is clear that the choices and decisions we make today will affect the health, safety and prosperity of every citizen in the nation

for years to come,” said Jackson, who is lobbying President Bush to appoint a federal commission to raise awareness and develop an infrastructure agenda for the 21st century to tackle the nation’s \$1.6 trillion infrastructure dilemma. “Our transportation, water and energy systems have not been maintained, let alone updated, to supply our ever-increasing demands,” Jackson added.

ASCE also is urging Congress to pass quickly the new transportation bill, a new Clean Water Act and a Safe Drinking Water Act that will provide critical funding to replace aging and overburdened transportation and water facilities. The engineering society is also

suggesting that Congress close the transportation shortfall by increasing the federal gas tax to 19.2 cents up from 13.2 cents. While President Bush has opposed any effort to raise the gas tax, his Democratic opponent in the 2004 presidential election, Massachusetts Senator John Kerry, is advocating a gas-tax increase.

#### **Energy Needs**

While roads and bridges represent more than a third of the \$60 billion plus investment in the state infrastructure, the expansion of energy plants and transmission lines represents an estimated \$12 billion that will be paid for by ratepayers over the next ten to fifteen years and \$15 billion over twenty years. Wisconsin Energy Corporation’s Power the Future plan is a \$6.3 billion project that will add two coal and two natural-gas power plants, new distribution networks and new pollution-control equipment. The American Transmission Co., Pewaukee, plans to invest \$2.9 billion in new transmission lines and other facilities over the next ten years. Other energy utilities in Wisconsin such as Alliant Energy Corporation, Madison; Wisconsin Public Service Corporation, Green

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Bay; and Madison Gas & Electric Co. plan to spend between \$2 billion and \$3 billion on new power plants and distribution networks.

Wisconsin's electricity use has more than doubled since 1970. Today's electric generating capacity is estimated at 14,000 megawatts. Based on the growth rate of 3 percent a year, by 2016 total demand for electricity is expected to reach 20,400 megawatts. Four of the state's largest investor-owned utilities have planned more than half a dozen new power plants, and independent power producers have proposed three additional plants in the state that will be paid for by electric residential and business ratepayers. While many of the plants have been proposed, not all have been approved yet by the PSC. Opponents to new power plants have also delayed the construction of several plants through court battles.

Wisconsin also depends on out-of-state power for more than 15 percent of its electricity. The state is handicapped by its location with Lake Michigan to the east and Lake Superior to the north, limiting its import capability. High-voltage, interstate transmission line improvements have been proposed and one \$420 million transmission line from Wausau to Duluth, Minn., is nearing its first construction phase. Wisconsin also has limitations on the amount of natural gas that can be shipped into the state. The ASCE report projects that Wisconsin could experience electricity capacity shortages by 2007 if no new plants are constructed. The proposed Power the Future plan and other building projects will increase the rates consumers pay over the next ten to twenty years.

Two decades of failing to build power plants and transmission lines kept Wisconsin energy prices artificially low, said Bill Harvey, president and chief operating officer of Alliant Energy. In April, Harvey spoke to more than 200 people at the Metropolitan Milwaukee Association of Commerce Energy Forum and told the forum attendees that Wisconsin utilities have created a surreal environment when it comes to pricing.

"All of us are concerned about our mistakes of the past coming home to roost and creating price shock on a fragile Wisconsin economy," Harvey said. "We are correcting an errant course. The reality is we are catching up in big lumps."

Gale Klappa, the new chairman and chief executive officer of Wisconsin Energy Corporation, Milwaukee, will be asking the state PSC for a 3 percent to 4 percent electricity rate increase for the next four to five years to help pay for Power the Future. In late March, Wisconsin Public Service Corporation filed a request for an 8.6 percent electricity rate increase and a 4.5 percent increase in natural gas rates.

### **Schools**

Of all the infrastructure categories studied by the engineering society, few are more controversial than school spending. In Wisconsin, school-building referenda have less than a 50 percent approval rate by local voters. The Wisconsin Department of Public Instruction (DPI) estimates that 50 percent of the state's public schools are more than forty years old. DPI surveys indicate that 57 percent report maintenance budgets that are less than adequate to raise the overall condition of the schools to good. DPI records show an estimated \$1.6 billion in additional funding is needed to bring the state's K-12 schools up to good condition. A 1999 DPI "School Facilities Report" and survey of school administrators showed that 55 percent of all schools required additional funding for repairs, renovation or additions.

### **Airports**

Major airports in Wisconsin have adequate capacity to meet projected passenger traffic. However, the ASCE report shows increases in current spending are needed to address pavement and navigational improvements. ASCE gave DOT's bureau of aeronautics high marks for documenting a plan for the future of aviation in the state. In 2001, the bureau estimated a gap of \$17 million between funds available and funds needed. Over the next twenty years,

the gap increases to \$1.1 billion, according to ASCE.

### **Dams and Stormwater Facilities**

Two of the infrastructure areas covered in the ASCE report that were difficult to quantify included spending on dams and stormwater facilities. The society criticized the state for under-funding floodplain management programs and dam safety. Relatively modest state funding could have secured an increased federal cost-sharing for floodplain management and dam investments, according to ASCE. The cost for improving dams in the state is estimated at \$82.5 million over the next two decades. ASCE did not provide an investment estimate for stormwater management and facilities improvements, but cautioned that federal regulations will soon be in place that will necessitate new state investment.

### **Brownfields**

The remediation and cleanup of up to 10,000 brownfield sites in Wisconsin could cost \$15 billion over the next twenty years. While the state gets high marks for initiating successful programs for the cleanup of contaminated sites, there may be more than a thousand parcels of tainted land not yet discovered. The precise financial resource needs of brownfields are difficult to assess because not all sites are known and the level of contamination of some of the unknown sites will vary greatly. Using a typical range of remediation costs of from \$250,000 to \$1.5 million per site, the total cleanup of 10,000 brownfield sites could easily reach \$5 billion.

### **Drinking Water**

Of the twelve categories of infrastructure assessed in the ASCE report, Wisconsin's drinking water supply infrastructure and

municipal wastewater facilities received the highest ratings. However, because of new standards for drinking water quality, combined with declining groundwater levels and aging treatment facilities, water supply facilities will require \$3 billion of investment over the next twenty years. While the vast number of the state wastewater treatment plants meet the conditions of their permits, there are estimated future needs through 2020 that exceed \$3.35 billion, according to ASCE and a U.S. Environmental Protection Agency Clean Water Needs Survey.

The financial needs of drinking water utilities will continue to increase as the population

of the state and the demand for water increases. The issue is further complicated by existing water supply sources becoming less abundant and potentially more contaminated. The Wisconsin Department of Natural Resources (DNR) is also facing budget cutbacks that will affect how DNR administers the primary enforcement requirements of the Safe Drinking Water Act. The estimated \$3.1 billion for drinking water improve-

ments could also double, according to ASCE, when new regulations for radionuclides, arsenic and security system improvements are enacted by federal authorities.

With all the infrastructure work that's likely to get underway in the next twenty years, some construction industry and government officials wonder if Wisconsin has the work force and expertise to handle the jobs. "Physically, I think we've got the capacity and know-how to rebuild our functionally obsolete infrastructure," said Larry Lunda. "The real question is whether we have the stomach to make more funding available to do the job."

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