Northeast Midwest *Economic Review*

Fall 2003

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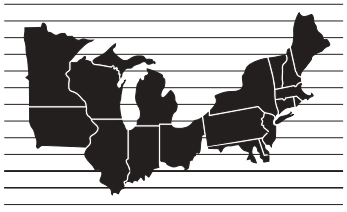

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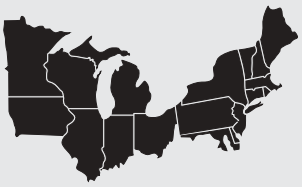

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The Northeast-Midwest Institute is a Washington-based, non-profit, and non-partisan research organization dedicated to economic vitality, environmental quality, and regional equity for Northeast and Midwest states. Formed in the mid-1970's, it fulfills its mission by conducting research and analysis, developing and advancing innovative policies, providing evaluation of key federal programs, disseminating information, and highlighting sound economic and environmental technologies and practices.

The Institute works closely with the Northeast-Midwest Congressional and Senate Coalitions. Formed in 1976, the House Coalition, co-chaired by Reps. Marty Meehan (D-MA) and Jack Quinn (R-NY), is a bipartisan group of lawmakers who recognize the common problems facing their states. The Northeast-Midwest Senate Coalition was formed in 1978 and now is chaired by Sens. Susan Collins (R-ME) and Jack Reed (D-RI). Together, the Coalitions seek to influence those issues of greatest importance to the Northeast and Midwest.

FROM THE EDITOR

The biannual *Northeast-Midwest Economic Review* offers a forum for ideas on key issues facing the region. The Northeast-Midwest Institute's web site — www.nemw.org — provides more timely news, meeting announcements, and data updates.

In this issue —

Great Lakes Restoration

by Allegra Cangelosi

Republican and Democratic leaders of the Great Lakes Task Forces recently energized the region's advocates with major legislative proposals to protect and restore the Great Lakes ecosystem. House and Senate bills (H.R. 2720 and S. 1398) rightfully aim to dramatically increase federal coordination and resources devoted to clean up and care for this globally significant fresh-water resource. Support for the bills among the Great Lakes delegation is growing daily (the House bill, for instance, soon will have 100 cosponsors). But regional support in Congress, and even a law on the books, does not assure on-the-ground improvements in the Great Lakes ecosystem. National support, including in the appropriation and authorization of funds, will be necessary. How can the Great Lakes region garner the support it needs and make ecosystem restoration a reality?

The first requirement — and perhaps the most obvious — is a united front, and the ad hoc team working to assure the restoration initiative's success is already impressive. The region's governors have expressed their support for restoration legislation and outlined a series of supporting ecosystem principles. The governors also have committed to a full partnership with interested mayors. Mayoral members of the newly-established Great Lakes Cities Initiative have, in turn, endorsed protection and restoration legislation, and have expressed receptiveness to active involvement with governors in leading the bills' proposed restoration advisory board. A coalition of environmental organizations, commonly known as the Blue Group, is meeting regularly to discuss refinements and strategy, while the region's scientists are reviewing ecosystem indicators and restoration criteria that could provide a scientific basis for measuring progress toward restoration goals. In Washington, while the House and Senate bills differ on some matters, lawmakers also express a commitment to bipartisan, bicameral, and intergovernmental cooperation.

Federal funds are certainly key, but they are not the beginning and end of a common mission for restoration.

A second requirement, however, is more elusive. It is an informed mission. Federal funds are certainly key, but they are not the beginning and end of a common mission for restoration. In fact, it could be argued that they are the easy part of a rallying cry. The Senate bill would provide up to $600 million per year over a ten-year period for grants to Great Lakes restoration activities, and the House measure would offer up to $800 million per year over five years for states to conduct restoration activities based on approved restoration plans. But restoration will not ensue from any process that makes obtaining that federal money the effort's common mission. In fact, perverse outcomes (unplanned and unwanted) are more likely. Here, the Great Lakes region — despite its unique complexities (such as the involvement of eight states and two countries) — will benefit from analyzing past efforts at ecosystem restoration by other regions, including those in the Florida Everglades, Chesapeake Bay, and Upper Mississippi River. In particular, the region should examine the "story behind the story." What made the political gears turn? In particular, what were the quid pro quo agreements that made political success possible? Where did the federal funds flow? Were the desired outcomes achieved for the ecosystem?

Instead of simply chasing the money, the Great Lakes region should carefully evaluate what it wants for the watershed in 20, 50, or 100 years. No doubt we need to clean up contaminated sediments, restore the natural flow regime of the lakes and tributaries, enhance wetlands, and block the invasive of alien species, but restoration planning also should aim to transform the future of the region's human systems that impact those features. For example, the region's transportation system, electricity production and delivery processes, and land-use planning mechanisms all need modernizing to make them compatible with long-term ecosystem restoration and protection objectives. The region's savvy industrialists will see this restoration effort as an opportunity to move aging infrastructure into the 21st Century.

Defining and executing a mission should lead to a third and perhaps most important requirement for a successful protection and restoration effort. The region must commit to carefully-selected actions at each level of government. The Great Lakes region would not be the first one to do so. Louisiana recently voted by referendum to change

its constitution to make water use more consistent with ecosystem restoration objectives. Florida, meanwhile, established a bonding authority and imposed taxes on farmers and landowners in order to keep Everglades restoration on schedule and on budget.

Such gestures at the regional, state, and local level will persuade federal appropriators, like no amount of letters and lobbying could, that federal dollars devoted to the region under consideration will be well-spent. It also provides the region itself with a standard of commitment to help discipline use of any funds that the federal government provides to the purpose intended.

Obtaining money and achieving a meaningful long-range objective require partnerships and visible commitment to those partnerships. The current cooperation of governors, mayors, federal lawmakers, environmentalists, and scientists is an excellent start, but industrial partners also are needed at the table in these planning stages. Moreover, a truly productive initiative requires a realistic long-term vision of what sustainable restoration will look like in the region.

The restoration initiative will be much more likely to be passed, obtain funding, and be implemented well if it incorporates specific ways that all constituencies of a healthy Great Lakes ecosystem (industrial, municipal, and public) can and will participate in achieving the desired outcome.

It must examine what human systems will have to change and how these changes can be brought about.

Great Lakes advocates for years have struggled for a few dollars here and a few dollars there in order to tackle overwhelming environmental challenges. Such an approach has lacked vision and focus, and to a large extent, success. The recently-introduced bills offer an opportunity to launch a restoration exercise in the Great Lakes region that embodies careful strategic planning, involves partnerships, and displays visible commitments within the region to success. It could be argued that given today's budget constraints, the region has no choice but to take the high road. The restoration initiative will be much more likely to be passed, obtain funding, and be implemented well if it incorporates specific ways that all constituencies of a healthy Great Lakes ecosystem (industrial, municipal, and public) can and will participate in achieving the desired outcome. A tax-exempt Great Lakes Bond, voluntary advances by industrial sectors, and state laws and local ordinances that could make aspects of restoration less expensive for federal appropriators offer some examples. Are there other, better examples? It is time to bring them forward!

Allegra Cangelosi is a senior policy analyst at the Northeast-Midwest Institute.

Creating an International Great Lakes Islands Refuge

by Karen Vigmostad

The more than 30,000 islands of the Great Lakes form the world's largest collection of freshwater islands, and their biological diversity is of global importance. Yet they remain the "islands nobody knows about," and are threatened by losses of habitat, species, and biological diversity. To protect and preserve these unique resources, the U.S. and Canadian governments need to create an International Great Lakes Islands Refuge.

The Great Lakes islands have unique landforms, plants and animals, and cultural history. They are living laboratories of natural selection. They contain globally-rare conservation targets, such as alvar plant communities — found only in Scandinavia and the Great Lakes ecosystem — and they provide breeding habitat for endangered species, such as the Great Lakes piping plover and the Lake Erie water snake. Many Great Lakes islands offer stopover sites for migratory birds, and they provide climatic buffers and other special protection for fish nurseries.

Great Lakes islands play a particularly important role in the ecoregion's biodiversity. Dr. Bruce Manny of the U.S. Geological Survey, who has spent 25 years studying the fish and wildlife around the 21 islands in the Detroit River, believes islands are the nuclei of native biodiversity. Dr. Judy Soule has found that Michigan's 600 islands hold a disproportionate share of rare, threatened, and endangered costal species — seven times more than the expected rate.

Threats to these islands have been increasing. Sprawling development has harmed shorelines and habitat, air toxics poison the freshwater, and non-native species — such as spotted knapweed — are destroying fragile island ecologies. Global climate change, of course, is an especially serious threat since the islands' very boundaries are defined by the water levels of the lakes.

We need to think long-term, in order to create a binational framework that will ensure the conservation of the islands of the Great Lakes. Timing is critical since a significant number of U.S. islands are becoming available for transfer within the federal government.

A new collaborative — financed by EPA's Great Lakes National Program Office and including the Northeast-Midwest Institute, Nature Conservancy's Great Lakes Program, Nature Conservancy of Canada, University of Minnesota, and U.S. Fish and Wildlife Service — is trying to advance our knowledge about the islands as a collective. The collaborative will work with islanders and island owners, as well as tribes and First Nations. It will help identify the island areas of most ecological significance, the full slate of Great Lakes islands-specific conservation targets, and the overall conservation status of the islands. In future years, the collaborative will produce a *State of the Great Lakes Islands Report* that will include conservation targets, priority islands, island indicators, and an assessment of the current state of island conservation. Such information is needed if we are to make intelligent acquisition and management decisions or to prioritize conservation efforts.

We need to think long-term, however, in order to create a binational framework that will ensure the conservation of the islands of the Great Lakes. Timing is critical since a significant number of U.S. islands are becoming available for transfer within the federal government, and several large islands in northern Lake Huron have sold for millions of dollars in national auctions without regard for their value as public natural resources.

Addressing ecologically significant islands represents part of a movement from solely addressing conventional and toxic pollution to adding biological and ecological concerns. In the first wave of environmental effort we focused on problems such as fish kills caused by excessive nutrients—principally phosphorous—entering the lakes. During the second wave, our attention turned toward toxic contaminants, such as mercury and PCBs,

entering the tissue of fish, wildlife, and human species. Quite recently in a third wave, we have begun to address biological pollution caused by the invasions of nonnative aquatic species such as zebra mussels. We also are in a fourth wave that focuses on the problems resulting from biological simplification, including the loss of habitat (such as wetlands, savannas, and prairies), lessening of biodiversity, and extinction of species. This biological simplification is taking place in the lakes, as well as on the land, and it must be addressed if we are to ensure a healthy, vital Great Lakes ecosystem.

While threatened, many Great Lakes islands are in excellent condition due to their relative isolation and northern location. Therefore, the costs of protecting priority island areas in perpetuity will not be large, yet the benefits will be tremendous. As the Great Lakes community considers federal legislation to restore the Great Lakes ecosystem, we must focus on existing biological resources such as islands. This effort must look to the future and plan for a binational refuge that will protect and preserve these precious and unique resources.

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The Detroit River International Wildlife Refuge — the first international refuge in North America — can serve as an excellent model for a larger refuge that would accept all federally-owned islands and thus protect the islands in perpetuity. Many Great Lakes islands already are being held by sister federal agencies that lack the authority — despite their good intentions — to adequately protect their biological values. A few islands, for instance, are contaminated with mercury from decommissioned lighthouses and need cleanup efforts so they can transferred.

President Teddy Roosevelt in 1903 established our nation's first wildlife refuge when he protected Pelican Island and its important bird rookery. As we celebrate the refuge system's 100th anniversary, preserving Great Lakes islands — this time on a binational basis — would continue and expand a beneficial tradition.

Dr. Karen Vigmostad is a policy analyst at the Northeast-Midwest Institute.

Local Benefits From Cleaning Contaminated Sediments

by Nicole Mays

Environmental restoration makes economic sense, particularly when it comes to contaminated sediment. A recent study of Waukegan Harbor, Illinois — conducted through a collaborative effort of the Northeast-Midwest Institute, the University of Illinois, and San Francisco State University — demonstrates how a cleaner harbor will improve the local economy. It also highlights the growing potential of economic valuation methodologies to justify environmental remediation.

Persistent toxic substances, specifically those associated with harbor sediment, cost society hard dollars in both environmental and economic damage. Throughout the Great Lakes basin, 43 sites — known as Areas of Concern — suffer the heaviest contamination, the result of a legacy of unregulated industrial and municipal discharges. Of the sites, only two have been restored since the time of listing in the early 1980s. Both of these are in Canada.

In a 2003 study, the United States government estimated $7.4 billion dollars is required to clean up the 26 Areas of Concern located on the U.S side of the basin. Although this cost is substantial, no action can hurt local communities and their economies even more. Direct costs caused by unremediated pollution include losses suffered by recreational and commercial fisheries and reduced taxes associated with discarded industrial lakefront land. The presence of contamination also increases the cost of routine harbor maintenance, and delayed dredging can allow sediments to accumulate and impede shipping and boating activities. Contamination also may cut the value of nearby properties, discourage tourism, and threaten human health.

Studies detailing the economic benefits of specific sediment remediation opportunities may be one way to help break the logjam. Such information also will help policymakers prioritize further remediation projects and ultimately clean up these environmental "hot spots."

The study conducted by the Northeast-Midwest Institute, University of Illinois, and San Francisco State University focused on the Waukegan Harbor Area of Concern and examined how residential house prices might be affected by cleanup activities. The study is one of the first attempts to calculate and justify the spending of money to clean up an Area of Concern. The two-year effort will engage and leverage support for sediment remediation in Waukegan Harbor, as well as provide a valuable example to other Great Lakes communities of potentially-hidden benefits of sediment remediation. It is hoped that Waukegan and other Great Lakes communities will use this information as a catalyst to advance sediment remediation and to engage previously-untapped investors, firms, community groups, and individuals in the sediment cleanup process.

Waukegan Harbor

Waukegan Harbor is the only Area of Concern in the state of Illinois, and at the time of listing, was one of the largest sources of PCBs in Lake Michigan. PCBs bioaccumulate through the food chain and present significant health risks to humans, particularly children who consume fish caught from contaminated areas. The presence of PCBs also results in commercial vessel restrictions. For many years, ships entering Waukegan Harbor have been forced to reduce their loads by 40 percent in order to avoid scraping and dispersing the harbor's rising silt.

Although cleanup efforts have begun at Waukegan Harbor, pollution is still an issue and more remediation needs to be done. Cost remains a major obstacle hindering progress. While nearby communities clearly have much to gain from cleanup, policymakers want to know if those benefits justify the millions of dollars required to remediate the harbor area's sediment.

The economic benefits study employed two different types of data. The first used residential property sales in Waukegan and the surrounding Lake County area, as well as Census data, to reveal actual housing patterns, reflect buyer's sensitivity to Waukegan Harbor and its environmental conditions, and suggest the impact of those conditions on the local economy. The second data set relied on a survey of 2,400 recent homebuyers in the local area to elicit information about their knowledge of conditions in the Waukegan Harbor area at the time of purchase, as well as their reactions to proposed (hypothetical) changes in the harbor area.

Variations of the two data sets were combined to produce three separate

estimates of the economic benefit of Waukegan Harbor cleanup to local homeowners. The first calculated how much households were willing to pay for harbor cleanup. As expected, the reactions varied according to a homeowner's income, with wealthier households willing to pay more for harbor cleanup. The average willingness to pay for full cleanup was $1,266/year for Waukegan households, compared to $3,466/year for households elsewhere in the wealthier Lake County communities. These numbers equate to a total annual willingness to pay for full cleanup of approximately $241 million (13 percent of the housing stock's value) for Waukegan households, and $6.4 billion (19 percent of the housing stock's value) for residents of other parts of Lake County.

The second economic benefit estimate investigated how local homeowners perceive and value the harbor area's current condition. This approach found that Waukegan residents who believe the harbor is unattractive and unsafe paid approximately 16 percent less for their homes than those who felt the opposite. This conclusion suggests Waukegan homeowners have been compensated by the housing market for the harbor condition through lower home purchase prices. By paying less, these homeowners reveal their "willingness to accept" compensation in order to live in the vicinity of an environmental disamenity.

In contrast, homeowners living outside Waukegan who perceive the harbor as unattractive and unsafe were found to have paid 18 percent more for their homes compared to homeowners who did not share these views. By paying more to live farther away from the perceived disamenity, residents outside of Waukegan revealed their willingness to pay in order to avoid living in proximity to the contaminated harbor. These findings result in a calculated loss of approximately $211 million in home values to the City of Waukegan. Put another way, the benefit of a cleaner harbor environment, as reflected in City of Waukegan's residential real estate prices alone, is approximately $211 million.

A third economic benefit estimate assumed that cleanup of Waukegan Harbor and subsequent redevelopment will wipe out the ill-effects of proximity to the harbor. Based on this statement, the estimated home value appreciation for a Waukegan homeowner in the event of harbor redevelopment was calculated to be $53,000. This approach estimates the aggregate benefit of harbor redevelopment to the Waukegan community through home value appreciation at more than $830 million.

Justifying Cleanup of Waukegan Harbor

The three economic benefit estimates, despite their differences, reveal that Lake County's current homeowners, particularly those in Waukegan, can expect increased residential real estate prices with a cleaner harbor. The calculated values also suggest that higher house prices alone are enough to compensate for and justify the spending of money to clean up the Area of Concern.

Of course, house price increases are just one of many economic benefits that residents can anticipate from full harbor cleanup. Remediated and returned to productive use, Waukegan Harbor area also will improve commercial and recreational navigation, as well as enhance the health of children, adults, plants, and animals.

Harbor cleanup also can bolster Waukegan's growth and redevelopment. Changing the harbor's current negative image to a positive one will attract commercial businesses, provide recreational opportunities, and encourage new residents to move to the area. The harbor area's remediation will restore Waukegan's reputation as a place to live, do business, and visit.

Conclusion

This study builds on many years of work carried out by the Northeast-Midwest Institute in the field of economic valuation, including the coordination of a Blue Ribbon Panel of Economists from the Great Lakes region; the publication of *Revealing the Economic Benefits of Protecting the Great Lakes*, a guidebook on economic benefits analysis; and a year-long project titled Scoping the Economic Benefits of Contaminated Sediment Remediation, in which three Great Lakes Areas of Concern, including Waukegan, were researched to determine the feasibility of economic studies at each site. The Institute hopes it can facilitate more research like the Waukegan study to help communities around the basin understand and monetize the potential benefits of harbor cleanup.

The potential benefits of a cleaner and safer environment need to be identified and highlighted if the Great Lakes are to be protected and restored. Economic benefits analyses may provide the necessary leverage to jumpstart the remediation process and remove the legacy of persistent toxic substances.

Nicole Mays is a policy analyst at the Northeast-Midwest Institute. The referenced study is a collaborative effort by economists Dr. John Braden and Arianto Patunru from the University of Illinois at Urbana-Champaign, and Dr. Sudip Chattopadhyay from San Francisco State University, as well as Allegra Cangelosi, a senior policy analyst at the Northeast-Midwest Institute, and Nicole Mays. More information about the study, including the final report, is available from the Northeast-Midwest Institute's Great Lakes webpage: http://www.nemw.org/greatlakes.htm

Investing in Manufacturing Technologies

by Diane DeVaul

Manufacturing is the backbone of the U.S. economy, yet only 2 percent of the federal research and development budget supports manufacturing technologies. To ensure our nation's competitiveness in the global market, we need more R&D, particularly for new production technologies that strengthen small and mid-sized firms.

Manufacturers over the last 36 months have lost 2.7 million jobs. Hard hit by global competition and a weak economy, small manufacturers in particular struggle to survive. The job losses reflect a "hollowing out" of the nation's manufacturing base as production moves to overseas suppliers in low-wage countries.

The industrial sector needs innovative technologies to be competitive. Yet as early as 1993, the National Research Council concluded that small manufacturing firms "are operating far below their potential; their use of modern manufacturing equipment, methodologies, and management practices is inadequate to ensure that American manufacturing will be globally competitive."

Globalization poses such severe challenges that some economists question whether small U.S. manufacturers can compete against countries with wages 80 percent lower, lax or nonexistent environmental regulations, and tax breaks and other incentives that encourage production shifts. Yet if introduced to modern technologies and adequate technical assistance, small U.S. firms can capitalize on their natural advantages: a tradition of innovation, proximity to markets, and quality.

Small manufacturers, according to the National Academy of Public Administration, represent a "critical national economic resource." They account for 95 percent of all manufacturing establishments, half of the sector's employment, as well as half of the manufacturing value-added.

Unfortunately, these small manufacturers face several barriers to performance improvement. Few enjoy sufficient resources to deal with regulations, overcome isolation, find high-quality assistance, and locate operating capital and investment funds for modernization. It's no surprise, therefore, that between 1992 and 1997 productivity growth for small manufacturers grew at only 15.5 percent, far less than the 22.6 percent for larger firms.

Another key barrier is the decline of federal investment in engineering, physical sciences, and manufacturing technologies. This cutback retards the development of new processes as well as diminishes the pool of knowledgeable workers. While funding for biomedical research has expanded from 25 percent of federal R&D in 1960 to roughly half today, support for the physical sciences and much of engineering has fallen. U.S. manufacturers, as a result, are losing a key advantage—advanced technology.

Although industry invests heavily in R&D, it focuses on product development, not production technologies. It is those core technologies that need to be updated regularly and quickly if U.S. manufacturers are to adapt to changing market conditions. Federal investment is needed to ensure that advances in materials science, energy efficiency, and pollution prevention are adapted for manufacturing applications.

Also needed is outreach. Just as agricultural extension agents help U.S. farmers adopt new seeds, equipment, and farming techniques, the Manufacturing Extension Partnership assists small and mid-sized manufacturers. Unfortunately, the administration for the past couple of years has tried to eliminate this program, despite its excellent reviews from manufacturers and independent evaluators.

Investing in manufacturing technologies no longer can be written off as "corporate welfare." Developing new manufacturing processes, materials, and technologies would benefit whole industries and the entire economy. Collaborations among universities, companies, and research facilities also would increase the future availability of trained and educated employees. The U.S. is losing jobs and economic prowess as other countries develop programs, incentives, and strategies to dominate the global manufacturing market. We can't afford not to back similar investments.

Diane DeVaul is the Northeast-Midwest Institute's policy director.

From Brownfields to Bedrooms:

Easing the Urban Housing Crunch

by Danielle Schoop and Barbara Wells

Housing development is emerging as an acceptable way to reuse urban brownfields — properties where the stigma of suspected or real contamination has discouraged redevelopment. Once considered the province of industrial and commercial developers, brownfields increasingly afford residential and mixed-use developers prime locations in urban communities. Residential redevelopment can ease the housing crunch caused by a burgeoning population, creating homes for both affluent newcomers who are rediscovering city living and the lower-income residents who struggle to keep up with rising rents and taxes.

Housing redevelopment often can make use of brownfield sites where lot size or location in residential neighborhoods makes them poor choices for industrial or commercial development. On average, 15 percent of city properties are deemed vacant, usually as a result of their size, shape, and location. A recent investigation of more than 100 brownfield sites in 12 New Jersey municipalities found nearly a third of the plots were not large enough for commercial or industrial facilities. The same study found that many of these brownfields were in residential areas; 80 percent were within a quarter-mile of the nearest residence.

Such lots can be just right for residential use. For example, a 36,000-square-foot lot in Lynn, Massachusetts, recently became the site of five single-family homes for low- and moderate-income, first-time homebuyers. Neighbors had petitioned the city to clean up the abandoned Empire Laundry site, and strongly supported the plan to build housing there. The Lynn Community Development Housing Corporation and Lynn Housing Authority & Neighborhood Development spearheaded the project, in cooperation with the city, the local Economic Development Industrial Corporation (EDIC/Lynn), and the Conservation Law Foundation. The U.S. Environmental Protection Agency (EPA) awarded EDIC/Lynn $350,000 for the site assessment and $500,000 to capitalize its Brownfields Revolving Loan Fund, part of which helped finance the redevelopment.

Once considered the province of industrial and commercial developers, brownfields increasingly afford residential and mixed-use developers prime locations in urban communities. Residential redevelopment can ease the housing crunch caused by a burgeoning population, creating homes for both affluent newcomers and the lower-income residents.

In Fort Wayne, Indiana, up to 47 single-family homes and a 50-unit senior housing project are replacing the former Bowser Pump Plant on a 12.5-acre industrial site just over a mile from downtown. The site included a tire recycling facility, right in the center of the Hanna-Creighton neighborhood, until 600,000 tires caught fire in 1997 and forced the evacuation of 1,000 area residents. Later that year, EPA and the city brought together 22 federal and state agencies to discuss an array of government brownfield cleanup and development resources for the site.

In 1998, EPA awarded Fort Wayne a Brownfields Assessment and Demonstration Pilot grant, and joined the city redevelopment commission in conducting site investigations. The process also included community meetings on redevelopment, building on the city's partnership with the Greater Progressive Baptist Community Development Corporation. The city spent almost $350,000 to demolish the site's charred buildings, and the U.S. Department of Housing and Development (HUD) provided $300,000 to install new public infrastructure to support the housing construction.

At Carthage Mills, 15 new homes occupy 13.5 acres that once housed a carpet and linoleum mill ten miles from downtown Cincinnati, Ohio. The project emanated from neighborhood complaints that businesses on the site brought heavy-truck traffic though the working-class neighborhood, kicking up dust and damaging sidewalks. The city spent $4.7 million to acquire the land and move ten

businesses from the site, and it invested another $3.5 million for demolition, environmental restoration, and installation of new streets, utilities, and sewers. In addition, for 15 years the city will waive each homebuyer's property taxes for improvements (excluding land). Eventually 60 manufactured and modular houses will occupy the property.

Creating Housing Near Amenities

Many brownfield sites offer proximity to transportation hubs and commercial corridors where housing demand is on the rise — or where an infusion of housing can revive struggling business centers. Housing development on these sites takes full advantage of existing infrastructure and offers residents the conveniences of urban living.

In Portland, Oregon, the Albina Corner project redeveloped a lightly-contaminated, three-quarter-acre site adjacent to a bus line and near a major light rail station, on the main street of several inner-city neighborhoods that form the core of Portland's federally designated enterprise community. Facing serious deterioration of the area's commercial strip, the neighborhood urged adoption of a plan for high-density housing and mixed-use development. A 1993 zoning change made the project possible.

The initiative includes 48 units of low-income housing on three floors, built around a central courtyard open to the sky, as well as 12,000 square feet of commercial space. Income from the first-floor businesses — including a bank, coffee shop, and art gallery — covers much of the project's maintenance costs and provides residents with ready access to banking and other services. The $4.4-million project was financed through a complex combination of 11 different public and private construction and take-out loans from banks and other sources. With minimal advertising, the apartments were leased within six weeks, well ahead of schedule, and 90 percent of the commercial space was leased prior to construction.

Northeastern cities report an average of 7.47 abandoned structures per 1,000 inhabitants — many of them old factories, train stations, schools, and hospitals that could be adaptively reused. Converting such historic buildings to housing helps preserve a community's identity and unique architecture.

In a 150-year-old commercial hub of Minneapolis, Minnesota, a former car dealership and automotive service facility are being transformed into a $30-million redevelopment complex of 30 affordable housing units, 48 town homes, 15,000 square feet of retail space, and 30,000 square feet of office space. The surrounding area includes a variety of industrial, commercial, and retail facilities, as well as high-density housing. A $240,000-loan from the Hennepin County Brownfields Cleanup Revolving Loan Fund is cleaning up the property, and that amount may increase to $425,000 should additional funds be needed to resolve environmental issues.

Rehabilitating Historic Structures

Housing development also can be a strategy for preserving historic or locally-significant structures on brownfield sites. According to a Brookings Institution study, northeastern cities report an average of 7.47 abandoned structures per 1,000 inhabitants — many of them old factories, train stations, schools, and hospitals that could be adaptively reused. Converting such historic buildings to housing helps preserve a community's identity and unique architecture.

In Amesbury, Massachusetts, a housing project is restoring eight historic buildings at the Upper Millyard site, an integral part of the city's central business district and market square. Constructed in the 1850s, the long-abandoned buildings once served as a woolen carding and weaving mill. Amesbury recognized the site's importance to the area's comprehensive revitalization, and began gradually acquiring the buildings in the early 1980s. The city purchased the last of the structures in June 2003 with funding from the city's Community Development Block Grant (CDBG) program allocation. Mass Development provided $171,000 to clean up part of the site.

In 1996, the Massachusetts Development Financing Authority and the Alliance for Amesbury funded a predevelopment study that identified the most appropriate reuse program for the Upper Millyard site. As a result, the redevelopment will include 46 loft-style condominiums as live/work space for artists; Amesbury's Carriage Museum; and a lobby with a gallery for artists to display their work. Nine of the 46 condominiums will provide affordable housing, to be allocated by lottery.

In the neighborhood along South Lamar in Dallas, Texas, the area's largest historic building has been converted into 455 residential loft apartments, just one block from a municipal rail station. Opened in 1912, the building was the first catalog merchandise

center outside of Chicago for Sears, Roebuck & Co., and is registered as a National Historic Landmark. The nine-story building has more than 1 million square feet, with a retail/entertainment promenade and row of artists' lofts in its old docking area. A private developer paid $2.1 million to purchase the site and spent $5.5 million to remove lead paint and asbestos contamination. The company has invested more than $100 million in overall site development, taking advantage of the area's federal Enterprise Zone status and tax credits for renovating the historic structure.

Knocking Down Barriers

As these examples show, creative approaches can overcome the barriers of high costs and residual stigma that once discouraged residential development on brownfield sites. The key is to alleviate longstanding fears, several of which are described below.

Low Profit Margins

In some cases, residential reuse will not produce income comparable to the profits of commercial redevelopment. In response, cities have spurred housing development by offering or securing grants, loans, and tax credits. Cities also partner with nonprofit groups in order to pool resources for affordable housing projects.

High Cleanup Costs

Cleanup expenses associated with a housing development can be higher than those at a site intended for commercial use. This discrepancy often results from state voluntary cleanup programs setting standards based on the future reuse of the site, and such standards usually are more stringent for homes than for businesses. However, experience shows the impact of these costs may be exaggerated, and recent studies have found that the cost of brownfield remediation is just 7 to 8 percent of total development costs. These expenses can be even lower for the small brownfields near residential areas that are best suited for housing, since many have light contamination or none at all.

Creative approaches can overcome the barriers of high costs and residual stigma that once discouraged residential development on brownfield sites. The key is to alleviate longstanding fears, such as low profit margins, high cleanup costs, social inequity, and uncertain property values.

Social Inequity

Siting affordable housing on former brownfields can trigger equity concerns, based on speculation that if given a choice, low-income people might not wish to live there. However, cleaning up and redeveloping vacant property as affordable housing often creates an asset for low-income communities and encourages more commercial and residential investment in the area. In fact, concerns about inequity have given way in some places to fears of "gentrification" — the displacement of low-income residents because brownfield redevelopment makes neighborhoods so desirable.

Because the practice of residential brownfield redevelopment is relatively new, worries remain about uncertain safety and property values. Yet case studies show that people are willing to live on former brownfields and their property values have increased. At a growing number of sites, an attractive location and the assurance that the land is safe have overcome any residual stigma. Fears about property values diminish with every new success.

Danielle Schoop was a fellow and Barbara Wells is a senior policy analyst at the Northeast-Midwest Institute. This article is adapted from a report that is available at www.nemw.org/bf2housing.pdf.

Predicting Energy Futures

by Dick Munson

Congress has been debating a wide-ranging energy bill that will impact air pollution, the federal budget, the price of power, the fortunes of disparate corporations, and even national security. Underlying those debates are projections about the future demand, supply, and cost of various energy options. Yet policymakers increasingly feel existing energy-economic models fail to answer, or even properly evaluate, their questions about the probable impacts of policy alternatives.

One job of lawmakers is to set goals — such as reduce greenhouse gases to certain levels — and they want modelers to help highlight the actions that would best achieve those goals. Today's models, unfortunately, do not meet that need.

No doubt we must develop models and plan for the future, but we also must admit that energy models have not been particularly accurate. During the 1960s, they tended to underestimate future energy growth, by 12 percent according to one review. Projections made in the 1970s, in contrast, overestimated energy consumption and production, by 43 percent according to a separate study. The energy shocks of the 1970s, and the resulting reductions of energy consumption in response to higher energy prices, forced economists to lower substantially their consumption estimates.

Those lowered projections proved to be fairly accurate, and modelers take pride in the key 1990 ten-year forecast being within 1.4 percent of the actual consumption for total energy. Yet economists largely ignore the fact that this forecast also overestimated electricity and petroleum prices by about 25 percent. One would have expected cheaper-than-anticipated energy to result in more consumption. The fact that energy use remained low with relatively low prices suggests, first, that modelers didn't account for technological and market changes that kept energy demand in check, and, second, that modelers underestimated the potential within the U.S. market for energy efficiency.

Modelers tend to focus on prices (even though their cost projections have not been particularly accurate), in part because costs have a clear impact on consumer demand, but also because prices are measurable (and modelers, essentially, are measurers). As a result, the modeling community often ignores the numerous non-price factors — such as environmental quality, national security, unexpected outcomes, and "anomalous" behaviors — that influence energy consumption and technological diffusion.

Modelers also largely avoid "externalities," such as the medical costs associated with health problems that result from fossil-fuel-fired power plants emitting pollution. Although these expenses are more than zero but less than infinite, most modelers, wanting to avoid uncertainties, tend to stick with zero. This approach is both unrealistic and distorting.

Most modelers also assume the status quo will continue. They tend to make projections based on historical averages, but the reality is that conditions and averages change, often as a result of technological innovation.

Models, of course, are as accurate as the assumptions on which they're based. Even the seemingly esoteric assumption can prove critical. Consider the often-used variable known as "autonomous energy efficiency improvement," which estimates a steady, annual percentage improvement in energy efficiency over time. Where that rate is set has a major impact on a model's conclusions. The difference between 1.0 percent and 0.5 percent may not seem like much, but, according to one study, the higher efficiency improvement would cut in half the projected greenhouse gas emissions by the year 2100. Employing the higher 1.0-percent estimate, therefore, would suggest to policymakers that additional costs associated with meeting carbon dioxide reductions are relatively low.

No doubt predicting future social trends and technological change is difficult, if not impossible. Some foresee a dramatically changing world, with mass customization and teleworking being just two of the trends that may transform markets. At the same time, new inventions — such as low-resistance electricity transmission — could revolutionize the generation, delivery, and use of electric power. Such uncertainties suggest that energy models would be more useful if they presented a broader range of possible developments.

Despite their shortcomings, models will remain an integral part of energy and economic planning. Policymakers no doubt need to ask more specific questions if modelers are to assess the potential for policy alternatives to achieve particular goals. At the same time, modelers must see policymakers as a key audience for their work. To meet that audience's needs, they must provide more realistic ranges, cooperate with diverse specialists, account for externalities and non-price factors, and consider the impacts of technological innovation.

Dick Munson is executive director of the Northeast-Midwest Institute.

Coordinating the Electricity Grid

by Dick Munson

If the blackout — which left 50 million people in the dark and cost our economy millions of dollars — taught us anything it is that the complex transmission grid that delivers electricity must be better coordinated and monitored. The current system is balkanized, managed too often on a piecemeal basis either by an individual state or separate utility. Since the interconnected transmission grid spreads across a huge geographic area, we need effective regional management and planning in order to ensure the infrastructure investments that can enhance reliability and efficiency.

Congress is now debating a complex energy bill that could spur the needed regional coordination. Such an approach would build on the Energy Policy Act of 1992, in which Congress and President George H.W. Bush began the transition of our nation's electricity industry to competitive wholesale power markets. The Federal Energy Regulatory Commission (FERC) has proposed a set of rules, known as the Wholesale Power Market Platform, to continue that transition.

Unfortunately, a backroom deal — which was not approved by either the Senate or House — was cut among senators from the South and Pacific Northwest to delay and undermine FERC's efforts. Powerful utilities in those regions want to maintain their monopolies. As beneficiaries of federal utilities, lawmakers from those regions also want to ensure their continued exclusive access to subsidized electricity. Noting that such delaying efforts were beaten back in the House Energy and Commerce Committee, senators and congressmen from other regions are trying to fight back and advance regional coordination of the electricity grid.

The blackout clearly illustrated the regional nature of power transmission. Events that occur in one state have impacts on other states. The disaster also demonstrated that the current system does not provide regulators with the big picture or with sufficient information to respond effectively to power failures.

Wholesale power markets — which increase generation efficiencies; stimulate investment in new technologies and infrastructure; provide greater choice in energy sources, especially in renewable power; and pass cost savings onto consumers — remain the best approach to optimizing our country's energy resources. Such markets have grown naturally into regional bodies, spanning multiple state boundaries. FERC's proposed actions would standardize market rules while recognizing regional variations among power market structures. They would establish independent regional transmission organizations throughout the country in order to oversee the grid's operation and foster regional planning. Such regional transmission organizations, one of which has been operating very effectively in the Mid-Atlantic, would ensure the grid's reliability and lower consumer costs through the more efficient dispatch of electricity generators. The blackout revealed that the timely implementation of Wholesale Power Market Platform and the quick establishment of regional transmission organizations are critical in achieving the efficient, seamless, and non-discriminatory wholesale power markets that will optimize our nation's energy resources. Delay will only serve to further injure much needed investments across the country in the electricity infrastructure. Our nation's economy is based on the free flow of interstate commerce governed at the federal level to ensure consistent, clear, and fair trade. Similarly, we need a standard set of rules to govern the free flow of electrons over state and regional boundaries. Such coordination will enhance state economies through greater efficiencies, improved reliability, and reasonably-priced power for homes and businesses.

A delay in FERC's rulemaking will only add uncertainty to potential investments in our energy infrastructure and negate years of progress made by regulators, state governments, utilities, and independent power producers. While certain members of Congress want FERC to slow down, Christine Tezak of Schwab Capital Markets testified that "Wall Street is frustrated FERC won't move faster." A delay, says Ohio Governor Bob Taft, would "impose an intolerable risk on the nation."

Regional transmission organizations or independent system operators are key to effectively managing the increasingly interstate flow of electricity. These coordinating bodies must be empowered to be the effective regional "traffic cops" that can ensure reliability and manage future power disruptions.

Simply too much is at stake to further balkanize our nation's electricity transmission system. Our nation cannot afford a backroom deal that opposes competition. We need a well-functioning and robust wholesale power market. After the August blackout, America's consumers demand a modernized and coordinated electricity grid that can deliver reliable and affordable electricity.

The Threat of TVA's Debt

by Dick Munson

The Tennessee Valley Authority's unwillingness to reduce — much less even plan to reduce — its massive debt is evidence of why the federal government should no longer be in the electricity business.

To accumulate a $27 billion debt while enjoying monopolistic control over its service territory ranks among the most egregious examples of business mismanagement. In 1997, TVA officials could no longer avoid this reality and outlined a ten-year plan to cut its debt to $14 billion by 2007. Unfortunately, the agency has made little progress toward that goal, and most of the limited progress results from the Tennessee congressional delegation slipping in a legislative provision that allowed TVA to break a contract and avoid $1.2 billion of penalties.

Although a $7-billion corporation, TVA lacks a business plan. And rather than impose financial discipline, TVA officials want to spend more money, as evidenced by their recent approval of $2.1 billion (including interest) to restart a troubled reactor that's been mothballed for 17 years. Ironically, TVA made this decision within weeks of cancelling a state-of-the-art turbine on which it had squandered more than $150 million. It's also surprising that the utility wants to increase its generating capacity at a time when several of its customers are cancelling contracts and more than half of its customers have refused to resign their most recent contract.

Because spending more money risks breaking TVA's legally-imposed $30-billion borrowing cap, the agency is feverishly devising Enronesque accounting tricks to make debt not appear to be debt. TVA's favorite scheme is the lease-lease buyback, in which the utility builds a power plant, leases it to a third party, and then buys back the lease. Its accountants perform creative back flips to ignore the U.S. Federal Securities Act's clear definition of such leases and other contingent liabilities as debt. They even ignore directives from the Office of Management and Budget to count such leases as debt.

Part of the problem is TVA's lack of accountability. This federal institution is run by a board of three individuals appointed to staggered nine-year terms by the president, often as a favor to political supporters from the region. The directors are charming individuals, but the small-town mayor, small-business manager, and an aide to the former vice president's wife have no experience in running a massive electric utility. Their decisions are not reviewed by state regulators or federal agencies. They are exempt from scores of federal and state laws. They also enjoy a monopoly in TVA's service territory, so they're not accountably even to market forces.

TVA also has outlived its purpose. Established in the 1930s, the agency successfully electrified and brought economic development to the Tennessee Valley. Now lacking a mission, it suffers an identify crisis, for it remains a federal agency yet operates as little more than a giant electric utility.

Another part of the problem is the knee-jerk defense of TVA by Tennessee's congressional delegation. These lawmakers vehemently attack any effort to shed a light on TVA's troubles.

Even the White House is not immune from the delegation's pressure. The Office of Management and Budget recently revealed the obvious — TVA will bust its borrowing cap if it restores the Browns Ferry reactor, spends $2.6 billion on long-delayed air pollution controls, and devotes another $4 billion to mercury pollution abatement. It also explained basic economics by saying TVA could reduce its debt by raising more revenue (e.g., increasing its rates), reducing its expenses, or selling some assets. OMB also labeled as inadequate TVA's suggestion that it could reduce its debt by $3 billion over the next 12 years, and suggested that the debt-reduction target should be in the range of $16 billion to $19 billion.

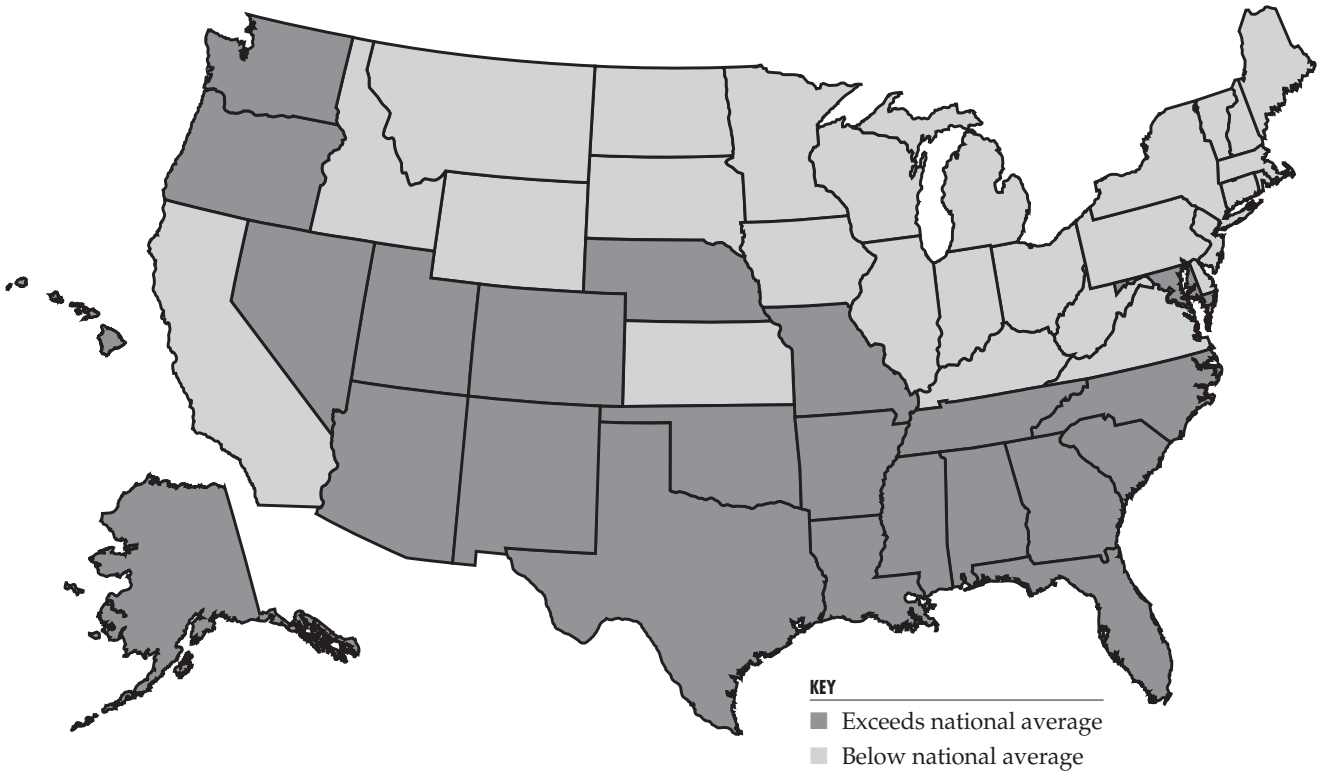
Tennessee's congressional delegation responded with alarm and attacks. Attempting a clever analogy, Rep. Zack Wamp (R-TN) said, "My response would be instead of 'shock and awe,' it's 'shock and awful.'" Senator Bill Frist (R-TN) used his influence to force OMB to back peddle. Realizing the downside of angering the Senate majority leader, a senior White House official hastily arrange a press conference with Tennessee reporters to suggest that TVA's $3-billion debt-reduction plan was "more of a target than we had before, so it is certainly a step in the right direction."

Bond rating agencies assume federal taxpayers will bail out bondholders if TVA goes bankrupt. According to economists at Yale University and the University of Oklahoma, TVA already is technically insolvent and represents a clear financial threat.

The utility's debt burdens both ratepayers and taxpayers. Because creative accounting is no substitute for fiscal discipline, Tennessee lawmakers need to express more concern for their state's consumers than for the TVA bureaucracy. At the same time, policymakers across the country need to impose accountability on this debt-ridden, mismanaged agency.

2002 Crime Rate in Northeast-Midwest was Below National Average

U.S. rate for total crimes equaled 4,119 per 100,000 residents.



Source: Northeast-Midwest Institute calculatons based on data from the Federal Bureau of Investigations, Crime in the United States, 2002. Illinois and Kentucky crime counts are based on FBI estimates.

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