

# IN THE RING

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## michigan suburbs alliance

*A plan for transitioning our economy and protecting our environment through innovative energy strategies*

## WHY ENERGY?

**In recent years, rising energy costs have strained already tight municipal budgets.** According to the U.S. Energy Information Administration, the price of natural gas rose 77 percent in Michigan between 2002 and 2006 while gasoline prices almost doubled over the same period. Electricity prices increased nearly 12 percent during 2006 alone. Energy to operate government buildings, infrastructure and vehicles is a necessity, but its cost can be mitigated by increased efficiency. Case studies suggest that municipal energy savings can reach into the millions of dollars.

While cost reduction is important, energy means so much more to Michigan cities. Reducing energy use and converting to renewable sources means less reliance on imports and more money that can be spent in Michigan. It will also lead to a cleaner environment with reduced air pollution and greenhouse gas emissions, improving public health and slowing global warming. City leaders can lead by example and encourage private sector action through incentives and education.

By taking aggressive yet achievable steps to reform energy use, Michigan cities can help create an economic environment of growth and innovation. Governor Granholm, in her 2007 State of the State address, vowed to invest \$100 million of public and private resources over the next three years to expand renewable energy research and production. Cities, acting in regional partnerships with universities and corporations, can capitalize on these investments to build an upward spiral of value creation. The Michigan Suburbs Alliance has a vision of vibrant, efficient, clean cities that are nationally recognized for their energy leadership. This document summarizes the need for action and the path to achieving that vision.



The Taubman Student Services Center at Lawrence Technological University in Southfield meets LEED criteria for sustainable site development and construction, water and energy efficiency, recycled materials selection, and indoor environmental quality.

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## A Struggling Economy

Michigan has been widely characterized as suffering a single-state recession due to upheaval in the domestic automobile industry and heavy reliance on manufacturing jobs. Population decline, rising unemployment rates, government budget deficits and corporations closing Michigan operations are all symptoms of this recession. The alternative energy industry presents an opportunity to reverse some of these trends, and Michigan is poised to become a leader in this sector due to its existing manufacturing capacity, world-class research institutions and its natural and political environments.

Government action can create a strong market for alternative energy. States and cities that have implemented aggressive renewable portfolio standards have seen considerable success stimulating new private investment and job creation. The potential for similar developments exists in Michigan. In 2001, the University of Illinois Regional Economics Application Laboratory estimated that a regional plan to increase efficiency and investment in alternative energy sources would create 38,000 jobs in Michigan by 2020.<sup>1</sup> Coordinated government effort will be essential to bringing any such plan to fruition.

One challenge that will need to be addressed in order to attract new economy industries like alternative energy to Michigan is our supply of available energy. The Michigan Public Service Commission estimates our need for electricity

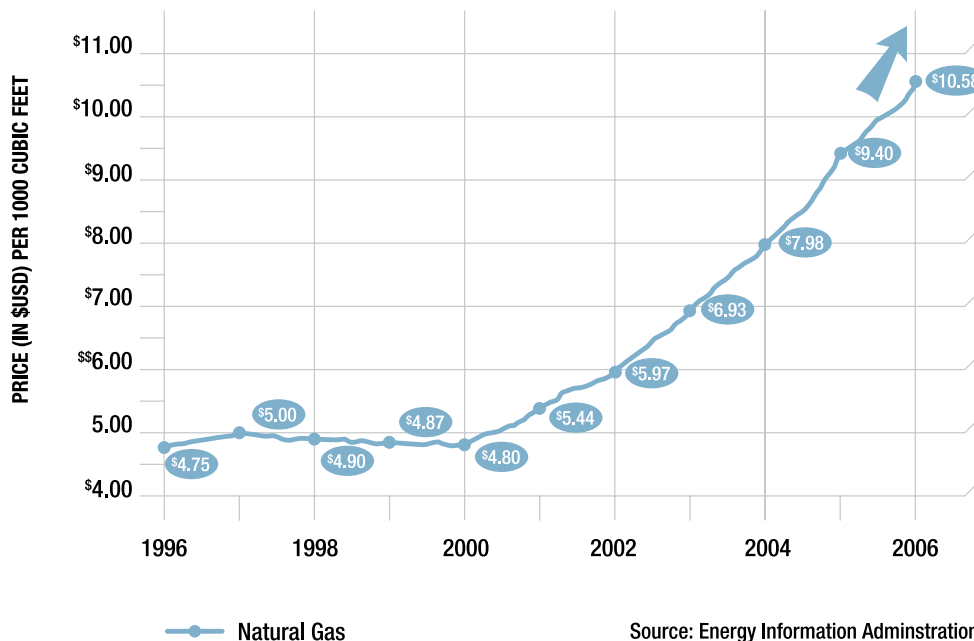
will increase by 1.3 percent annually without improved efficiency. If left unchecked, this demand will overwhelm our current supply.<sup>2</sup> Demand for electrical power could grow significantly with the recruitment of new economy industries, many of which typically have higher electricity needs. Increased efficiency and diversification will reduce the need for large-scale infrastructure investments to help serve this escalating demand.

In addition to spurring private investment and job creation, adopting aggressive renewable portfolio standards would increase in-state energy production, and thereby bolster the state economy. Michigan currently imports the vast majority of its energy supply from other states and countries. Recent estimates place the total annual cost of these imports at \$18 billion.<sup>3</sup> This cost is expected to rise as energy demand increases worldwide, fossil fuel supplies plateau or decrease, and the federal government institutes carbon restrictions. Shifting even a portion of these dollars in-state by utilizing alternative energy sources would provide a substantial boost to our flagging economy.

## Endangered Natural Environment

The need for change is not only economic in nature – Michigan cities must also do their part to reduce pollution and the potential impacts of global warming. Earth’s average surface temperature has risen by 1.4 degrees Fahrenheit in the past century, and the ten warmest years on record have occurred since 1990.<sup>4</sup> In Michigan,

**FIGURE 1: The Rising Cost of Energy: Commercial Natural Gas Prices in Michigan 1996-2006**



these changes have been accompanied by increasing greenhouse gas emissions; specifically, a 9 percent jump in total emissions from 1990 to 2002. These trends pose potentially severe consequences for Michigan's lakes, agriculture and wildlife, threatening to curtail our winter season, alter growing cycles and crop yields, and change the distribution of wildlife species. With 87 percent of Michigan's greenhouse gas emissions resulting

from energy production and consumption, strategies for curbing our usage and greening sources offer significant opportunities to reduce our negative environmental impact.<sup>5</sup> Public opinion polls show that Americans are hungry for solutions to the impending global warming crisis, and municipal officials can become leaders in this campaign by reducing energy use.<sup>6</sup>

## Leaving the Rust Belt Behind

The weight of Michigan's reliance on an outdated manufacturing sector affects not only the economy, but the state's public image. Too many outsiders associate Michigan living with polluting smokestacks and decayed cities, ignoring our unique natural, social and cultural resources. Reducing our negative environmental impact, strengthening our energy supply and advancing renewable portfolios will help southeast Michigan overcome its tired rust belt reputation and create a fresh, inviting public image. Promoting our region as environmentally-friendly and modern will help create a hub of private sector innovation and attract families, well-educated workers, tourists and businesses.

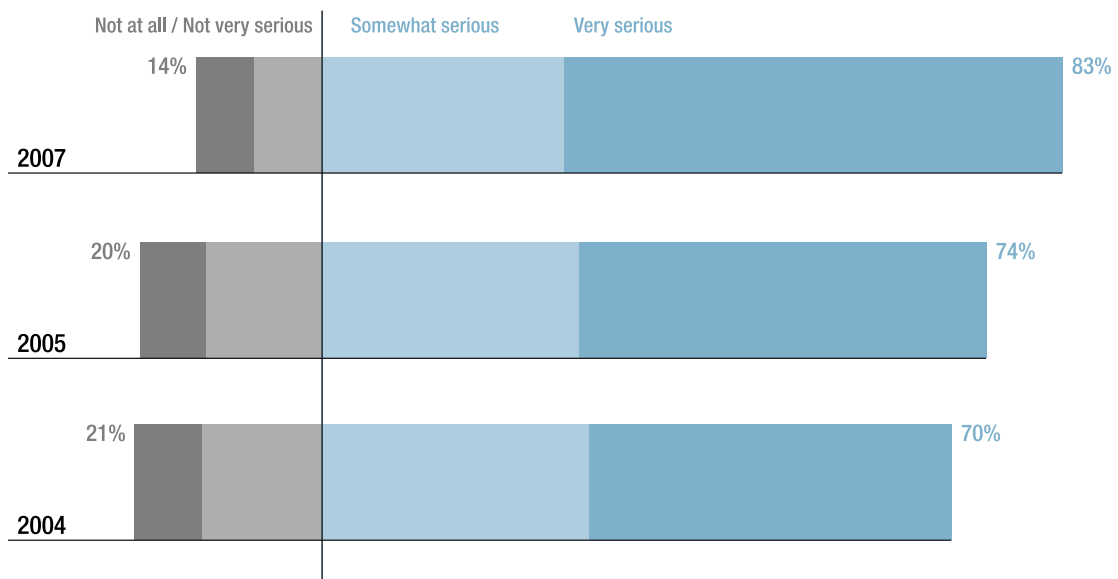
Government leadership will be essential to stimulate this transformation and may include

- Recognizing energy- and environment-related innovations through awards or competitions;
- Facilitating pilot projects, exhibitions and educational programs at libraries, schools and other public buildings;
- Elevating national awareness of southeast Michigan's abundant natural and educational resources and existing and proposed energy programs.

Chicago provides an excellent case study, summarized on page 5, of how a city can capitalize on its green image to attract new employers, residents and visitors.

**Check it out!**

**FIGURE 2: American Attitudes on Global Warming: How serious a problem would you say is global warming?**



Source: Yale Environment Survey, February 5-11, 2007, 1017 interviews

## CASE STUDIES

Energy efficiency, conservation and diversification create numerous opportunities for economic revival and cost-savings in southeast Michigan – so many, in fact, the choices are almost overwhelming. As we determine our own energy strategy, government-led initiatives that have been successful in other cities, states and regions could lend some insight to our efforts.

### Northeast Ohio Public Energy Council Builds Purchasing Power



More than 100 communities spanning eight counties in northeast Ohio passed local ordinances to form the Northeast Ohio Public Energy Council (NOPEC) in 2000. The Council, governed by a General Assembly composed of one representative from each municipal member, negotiates multi-year energy contracts for the residents of the region.

Through its combined purchasing power and regional cooperation, NOPEC has been able to negotiate lower rates for both electricity and natural

gas services after an open bid process. By contracting with a clean energy provider, NOPEC communities have also succeeded in obtaining a portion of their energy from renewable sources. While Ohio's regulatory system is different from Michigan's, the basic concept of community choice aggregation has potential to give Michigan local governments greater clout when making energy decisions.

### Pennsylvania: Green Investments Create Jobs



Forward-thinking energy policies have already stimulated job growth in at least one rust belt state. Under the leadership of Governor Edward Rendell, Pennsylvania has become the largest state purchaser of green energy in the United

States. Not coincidentally, it has also improved its ranking for job growth to 15th (in 2005) – up from 41st in 2003.

State legislation requiring electricity generators and distributors to provide alternative

energy to retail customers helped Pennsylvania attract two major alternative energy companies – Gamesa Corporation and Conergy AG, each world leaders in wind power production and solar power integration. Investment from Conergy AG alone will create up to 50 new engineering jobs and produce up to \$100 million in clean energy deals through year 2009. Another 975 permanent and construction jobs will be created through 57 clean energy projects initiated by the Pennsylvania Energy Development Authority. The grants and loans funding the projects are expected to produce \$240 million in private investment.

### Brookline, Massachusetts: Local Action = Cost Savings

Brookline, Massachusetts, a historic inner-ring suburb of Boston, recently joined the International Council of Local Environmental Initiatives (ICLEI) Cities for Climate Protection program through a formal Town Board resolution. ICLEI assisted the town's Climate Task Force in performing an emissions inventory and a local climate action plan. While town leaders joined the program for environmental reasons, they found substantial cost savings as well, for both municipal operations and for private citizens. Expanding existing practices such as recycling, composting and public and non-motorized transit saved more than \$400,000 annually for this city of 57,000.

An additional \$4.7 million annual savings are anticipated if a number of other proposed initiatives, such as building code reform, transitioning to alternative fuel vehicles and sustainable business awards, are implemented.



### Chicago LEEDS Cities, Builds Brand

Approximately ten years ago, Chicago Mayor Richard Daley began introducing a series of aggressive environmental programs aimed at making Chicago "the most environmentally friendly city in the world." These programs, organized by an annual series of ambitious action agendas, include water and air quality improvements, park system expansion and green building standards. The city adopted a mandatory building energy efficiency code even though Illinois does not have a parallel statewide ordinance. It holds municipal buildings to an even higher standard – the public Center for Green Technology was the

first municipal building to receive the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Platinum rating. Daley's administration has promoted the importance of collaboration with the initiative's slogan, "Conserve Chicago Together." This "greening" of the metropolis' image has coincided with rapid population and economic growth after two decades of stagnation. Recent articles in *The New York Times* and *The Economist* have lauded the city's environmental leadership.



# CREATING AN ENERGY STRATEGY

Cities and states across the country and even here in Michigan have successfully implemented creative, effective solutions to address their energy issues. There is much to learn from these models, but acknowledging our goals and values is necessary before we take action. Our next steps forward must be based upon these considerations:

## Economic Growth and Prosperity

A thriving economy is at the top of nearly every Michiganian's list. Our state is idling in economic stagnation, and alternative energy could help spur its transition to prosperity. With its manufacturing expertise, numerous available facilities and history of technological innovation, southeast Michigan is poised to become the foothold of the emerging alternative energy industry. The entire region stands to benefit from new jobs, new investment and a prosperous, vibrant future, but we need to work together to actualize this idea.

## Sustainable, Attractive Communities

Michigan boasts some of the most impressive natural resources in the world, and protecting them by neutralizing our communities' detrimental effects on the environment is essential. By implementing energy-conscious practices and processes, we can create communities that attract creative class companies and workers, communities that both employers and employees will enjoy calling home.



Cities can become more energy efficient by purchasing compressed natural gas vehicles like this dumptruck.

## Reliable, Efficient Public Services

Southeast Michigan's residents expect high quality, reliable public services, and energy is no exception. Our approach to energy must address the need to improve



Ann Arbor Energy Coordinator Dave Konkle displays the city's hydrogen fuel cell electric vehicle.

the quality of our energy supply and localize our energy sources. Finding ways to maximize energy efficiency can lead to significant cost savings, making funds available for other essential city services and creating additional opportunities for diversifying energy sources.

## Achievable Solutions

With so many innovative energy strategies to consider, finding those that are most conducive to the political and economic climate in southeast Michigan is especially important. We must take actions that are both politically and economically feasible. Furthermore, it will be especially important to implement strategies that maximize our impact by encouraging energy-conscious behavior from both the private sector and city residents. By reducing barriers and creating incentives for energy efficiency, green building, alternative energies, and environmentally-friendly lifestyles, we can create a ripple effect throughout our communities that will result in healthy, sustainable places.

The benefits of energy efficiency, conservation and diversification for southeast Michigan are both economic and environmental. Our economy is in dire need of transition, and our environment requires increasing levels of protection. Achieving lasting changes will take a widespread regional effort, and Michigan governments must lead the way by encouraging innovation and efficiency among businesses, residents and community institutions.

## Increase Efficiency and Reduce Energy Use

### Principles

Michigan's per capita energy use continues to steadily increase despite increasing costs. The state building energy code is one of the weakest and most outdated in the nation. Decentralized land use patterns have led to dramatic increases in fuel consumption and infrastructure expenses. Government should both lead by example and encourage private actions to increase efficiency.

### Actions:

- The state Legislature should update the uniform energy code to at least conform to the current International Energy Conservation Code. It should also allow municipalities to institute stricter codes if they wish.
- Cities should develop incentives, such as zoning code bonuses or matching funds, to encourage green building practices and other energy-efficient actions by citizens and developers.
- Cities and counties should perform energy audits and develop plans to increase efficiency through policies, such as operations and maintenance, and technology.

## Aggregate Our Power

### Principles

Individual units of government often lack the resources to cover the start-up costs of energy-saving technologies or the expertise necessary to integrate innovative approaches with existing practices. Economic growth and environmental protection are most appropriately pursued at a regional scale. Therefore, Michigan cities and counties should work together to pool resources and purchasing power.

### Actions:

- Cities and counties should work together to establish regional energy offices that will provide expert consultation and education for government officials and initiate and coordinate energy-saving programs. These offices, once established, would be the appropriate actor for many of the recommendations included in this document (although all can be executed without such an entity in place).
- The State should provide start-up funding for regional energy offices through grants, zero-interest loans or the Michigan Energy Efficiency Fund proposed in the Michigan Public Service Commission's (MPSC) 21st Century Electric Energy Plan.
- Cities should form buying pools for renewable energy, efficient appliances and other environmentally friendly products. As shown in the Ohio case study, the weight of combined buying power can bring about changes.

## Diversify Energy Sources

### Principles

Reducing reliance on imported, finite energy sources will create a more secure supply and ensure that more of Michigan's money stays at home. Investing in green technologies will promote local job growth and reduce negative environmental impacts.

### Actions:

- State and local units of government should create ambitious mandatory renewable portfolio standards with achievable benchmarks.
- MPSC should work with utilities to encourage voluntary renewable energy programs that exceed the state requirements, such as DTE Energy's GreenCurrents program.
- The State, in cooperation with local officials, should fund regional studies to find the best sites for alternative energy production, such as wind turbines.

## ADDITIONAL RESOURCES

**Interested in learning more about our region's energy opportunities?** Want to find someone to talk to or an organization to partner with? Compiling a comprehensive list of energy information resources would be nearly impossible, but the following organizations are action-oriented and relevant to Michigan cities. Contact them to learn more, obtain technical assistance or build partnerships.

- **ICLEI's Cities for Climate Protection Campaign ([www.coolmayors.com](http://www.coolmayors.com))** assists city leaders with developing and implementing uniquely tailored energy use reduction plans. ICLEI is the official implementation organization for the U.S. Conference of Mayors Climate Protection Agreement ([www.usmayors.org/climateprotection](http://www.usmayors.org/climateprotection)).
- **Sierra Club** has a similar program called Cool Cities ([www.coolcities.us](http://www.coolcities.us)).
- **The Michigan Public Service Commission's 21st Century Energy Plan** is available at [www.dleg.state.mi.us/mpsc/electric/capacity/energyplan/index.htm](http://www.dleg.state.mi.us/mpsc/electric/capacity/energyplan/index.htm).
- **Michigan's Department of Labor and Economic Growth's Energy Office ([www.michigan.gov/energyoffice](http://www.michigan.gov/energyoffice))** administers a range of funding opportunities and publishes numerous electronic newsletters.
- **NextEnergy ([www.nextenergy.org](http://www.nextenergy.org))** is a Detroit-based nonprofit formed to develop and advance the alternative energy industry in Michigan. They publish an informative monthly newsletter, the *Michigan Energy Report*.
- **The Apollo Alliance**, a nonprofit coalition of environmental organizations, public sector leaders and labor unions, has published two excellent reports on potential energy reforms at the city and state level. Both are available at [www.apolloalliance.org/state\\_and\\_local](http://www.apolloalliance.org/state_and_local).
- **The Great Lakes Renewable Energy Association ([www.glrea.org](http://www.glrea.org))** is nonprofit organization and great educational resource that advocates, promotes and publicly demonstrates renewable energy technologies.
- **The U.S. Department of Energy** manages a database of model building codes ([www.energycodes.gov](http://www.energycodes.gov)) and is the preeminent source of energy data ([eia.doe.gov](http://eia.doe.gov)).
- **The City of Ann Arbor's Energy Office ([www.a2gov.org/energy/](http://www.a2gov.org/energy/))** has been recognized as a leader in energy innovation by the U.S. EPA and is a model for local government action.
- **The Michigan Environmental Council ([www.mecprotects.org](http://www.mecprotects.org))** advocates for the environment at the local, state and federal levels.
- **DTE Energy ([www.dteenergy.com](http://www.dteenergy.com))**, the region's largest energy provider, offers advice on energy efficiency, conservation and diversification.

### THE *IN THE RING* SERIES

*In the Ring* is a quarterly serial developed by the Michigan Suburbs Alliance to explore cutting-edge policies and practices that support the vitality of the southeast Michigan region and its cities. The complete series is available online at [www.suburbsalliance.org](http://www.suburbsalliance.org).

### SUBURBS ALLIANCE

The Suburbs Alliance, a nonprofit organization founded in 2002, is a coalition of cities working to unite and strengthen metro Detroit's mature suburbs by elevating regional cooperation, reforming public policies and innovating redevelopment strategies.

### CREDITS

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