

# *Converging Solutions*

A PERFECT STORM OF OPPORTUNITY

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**ENERGY CENTER**  
OF WISCONSIN

# It begins with energy efficiency...

Message from Susan Stratton,  
Executive Director



The late Wisconsin Senator Gaylord Nelson said, "The economy is a wholly owned subsidiary of the environment, not the other way around." Today, as we look for solutions to our economic crisis, we're finding those solutions intrinsically linked to combating climate change and restoring the resource balance of our planet.

In his first speech to the Joint Session of Congress, President Obama identified three areas critical to our economic future—and he said, "It begins with energy."

The American Recovery and Reinvestment Act will put our nation to work making our homes and buildings energy efficient so we can save money on our energy bills. The President also has called on Congress to pass legislation that puts a market-based cap on carbon pollution to drive the production of more renewable energy in America.

Energy efficiency and renewable energy—they're naturals for our economy and our environment. The Energy Center has been working on these twin pillars of our energy policy for twenty years.

Energy efficiency is the workhorse that lets us use less energy. As a result of efficiency gains we've made since the energy crisis of 1973, U.S. power consumption is half of what it might have been. We have done good work but we need to do more.

Several Midwestern governors have pledged to reduce annual energy use two percent by 2015.

Many states have been achieving about a half a percent savings per year from current energy efficiency programs. To move toward a two percent reduction in energy use in the Midwest, we'll need new strategies and innovative programs. We cannot afford to leave savings on the table. It costs much less to save a kilowatt hour of electricity than it does to produce that kilowatt hour with no or low greenhouse gas emissions.

*We cannot afford to leave energy savings on the table.*

We believe we can meet the Midwestern governors' goal but it will require spending significantly greater amounts of money. However, the payoff is huge. In Wisconsin alone, it could generate \$1.2 billion in lifecycle energy cost savings, create 9,000 jobs and eliminate 1.1 million tons of greenhouse gas emissions.

While energy efficiency can reduce our energy use, it cannot eliminate it. We must rely more on renewable resources to supply us with energy. But we must develop our renewable energy resources sustainably—always keeping in mind the competing interests for these resources and the overarching need to maintain a healthy planet.

We are moved to accelerate our work by a growing sense of urgency. The economic crisis and global climate change have given us an unprecedented opportunity to bring energy efficiency and renewable energy to the forefront. Energy efficiency potential is about what could be, not just what is now, or what has been. We have talented, thoughtful people working on these issues and we're confident that energy efficiency and clean energy will drive our prosperity.

It is an exciting time to be part of the Energy Center. Our work is critical to moving us away from an economy based on fossil fuels to a sustainable, clean energy economy and we're proud to be part of the solution.



## WHAT WE DO

- Technical and market research
- Building performance
- Consumer opinion research
- Program evaluation
- Program design
- Professional education
- Policy research and analysis
- Energy modeling
- Community energy planning
- Quantify energy efficiency potential
- Renewable energy resource assessment



## *Accelerating energy efficiency*

The energy and economic landscape has shifted dramatically under our feet. As we search for solutions that fuel both our economy and our energy needs, efficiency stands out as an elegant choice. Energy efficiency has the potential to reduce consumers' energy costs, increase employment opportunities, decrease utility-related greenhouse gas emissions and leverage our investment in renewable energy.

*As we search for solutions that fuel both our economy and our energy needs, efficiency stands out as an elegant choice.*

The Energy Center is helping shape a future that taps efficiency as our nation's first energy resource.

**We're reshaping how we think about energy efficiency potential**—we're asking what could happen if we change our energy policy to be as supportive as possible of energy efficiency rather than assuming business-as-usual approaches.

**We're measuring energy use and assessing consumer behavior**—we're asking consumers how they use energy because we want to know how behavior influences actual energy consumption in homes and businesses.

**We're modeling energy use in buildings and communities**—we're uniting our practical experience in managing building energy use with simulation tools to give planners, architects and building managers the information they need to reduce their energy use.

**We're training the workforce**—we're educating building and energy industry professionals with the ideas, technologies, skills and strategies to deliver energy efficiency's potential.

## *Valuing our renewable resources*

While energy efficiency can reduce our energy use, it cannot eliminate it. We're relying more and more on renewable energy to meet a greater portion of our energy needs. Energy efficiency leverages our investment in renewable energy resources.

A simple example of a homeowner interested in installing solar technology illustrates the power of efficiency to leverage the investment in renewable energy. By reducing their electricity requirements through energy efficiency measures the homeowner can reduce the size (and cost) of the solar energy system they need. The same principle applies to our use of utility-scale renew-

able energy—the more we reduce our demand, the more able we are to meet that demand with renewable energy.

The Energy Center is helping shape a future that taps the full value of our renewable resources.

**We're mapping biomass resources**—we're showing policymakers the extent of our resources and the markets they're currently serving so they can be used efficiently and sustainably.

**We're developing alternative business models**—we're collaborating with public and private sector organizations to develop business models that allow

increased use of our biomass resources without depleting them or degrading the environment.

**We're administering environmental and economic research projects**—we're overseeing Wisconsin's Focus on Energy Environmental and Economic Research and Development Program that assesses Wisconsin's biomass resources.

*We're relying more and more on renewable energy to meet a greater portion of our energy needs.*

We are moved to accelerate our work by a growing sense of urgency. The economic crisis and global climate change have given us an unprecedented opportunity to bring energy efficiency and renewable energy to the forefront.

## *Our vision...unprecedented opportunity*

To fully realize the potential for energy efficiency to reduce our energy use and for renewable energy to meet more of our energy needs, we must:

**Develop programs for small to medium existing commercial buildings** that address both the building system and occupant behavior. Encourage implementation of all energy efficiency recommendations by connecting building owners to experienced contractors and financial incentives.

**Implement extensive residential whole-house retrofit programs** targeted at making it easy and inexpensive for people in older homes to make their homes more energy efficient by correctly adding insulation and reducing air leakage.

**Research barriers to reducing energy use and identify the top ten things a typical person should do.** What tools does our society lack to achieve those things? What prevents us from making these choices?

**Formally test variations on energy efficiency program offerings** to find out what works most effectively to get people to participate.

**Develop land management models** that allow groups of private landowners to manage their adjacent properties as an ecosystem and sustainably supply biomass resources for energy generation while maintaining and enhancing the whole system.

**Create biomass information and mapping tools** that show the proximity, composition and volume of biomass resources to potential users and markets.

**Make environmental science and energy a core course of study in high school and college curricula** so the next generation will be energy literate and understand how their everyday choices affect the environment and their energy consumption.

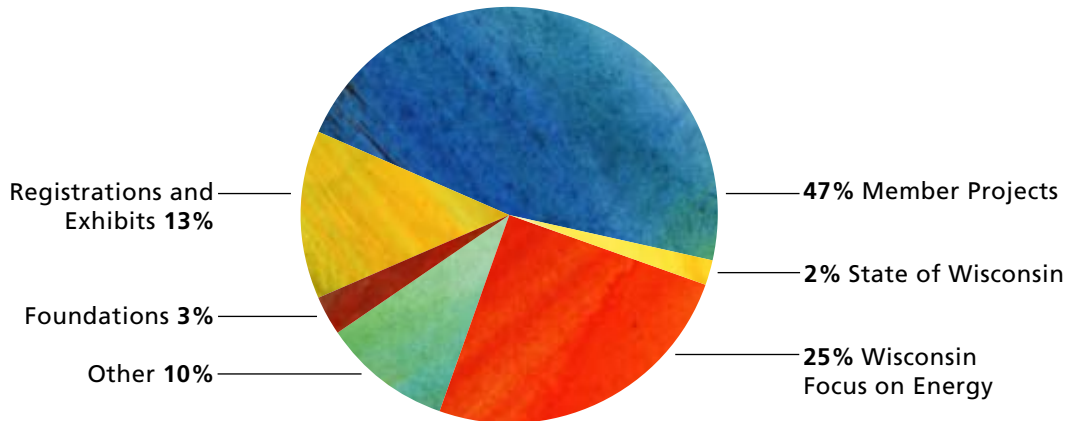


### 2008 INDEX

- Square feet of new construction that is more energy efficient because of whole-building analysis and design assistance from the Energy Center: 3.6 million
- kWh saved as a result of design and technical assistance from the Energy Center: 6.7 million
- kW saved as a result of design and technical assistance from the Energy Center: 3,027
- Therms saved as a result of design and technical assistance from the Energy Center: 231,000
- Number of buildings that benefited from design assistance from the Energy Center: 55
- Number of professionals that attended Energy Center continuing education programs: 3,000
- Annual electricity savings from efficiency needed to meet the Midwestern Governor's Association goals: 2%

# 2008 Energy Center Financial Summary

## FUNDING DIVERSITY



## SUMMARY BALANCE SHEET

<b>Assets</b>	<b>2007</b>	<b>2008</b>
Cash and Certificates of Deposit	\$479,597	\$448,963
Accounts Receivable	663,882	633,547
Other Current Assets	94,620	133,144
Fixed Assets	62,386	66,355
<b>Total Assets</b>	<b>1,300,485</b>	<b>1,282,009</b>
<b>Liabilities &amp; Net Assets</b>	<b>2007</b>	<b>2008</b>
Accounts Payable	364,475	338,854
Accrued Liabilities	133,170	138,662
Deferred Revenue	433,359	319,181
Other Liabilities	83,427	113,290
<b>Total Liabilities</b>	<b>1,014,431</b>	<b>909,987</b>
<b>Net Assets (Unrestricted)</b>	<b>286,054</b>	<b>372,022</b>
<b>Total Liabilities &amp; Net Assets</b>	<b>\$1,300,485</b>	<b>\$1,282,009</b>

## SUMMARY INCOME STATEMENT

	<b>2007</b>	<b>Percent of Revenue</b>	<b>2008</b>	<b>Percent of Revenue</b>
Revenue	\$3,819,082	100%	\$4,451,533	100%
Program Expenses	(2,642,298)	69%	(3,018,671)	68%
Management and General Expenses	(1,272,550)	33%	(1,346,894)	30%
<b>Change in Net Assets</b>	<b>(95,766)</b>	<b>-3%</b>	<b>85,968</b>	<b>2%</b>
Net Assets Beginning of Year	381,820		286,054	
Net Assets End of Year	\$286,054		\$372,022	

# Converging Solutions

Energy Center of Wisconsin • 455 Science Drive, Suite 200, Madison, Wisconsin 53711 • 608.238.4601

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The Energy Center of Wisconsin is a nonprofit organization dedicated to exploring ways to reduce the environmental impact of our energy use and to sharing our knowledge through research, consultation, education and outreach initiatives.

Printed on paper made from 80% post-consumer recycled fiber and manufactured entirely with renewable energy.