

# Great Lakes Bay Regional Energy Efficiency, Conservation and Renewable Energy Strategy



A framework for collaboration to reduce energy use and expand renewable energy efforts in Bay, Saginaw, and Midland Counties.

Prepared by:



March, 2011



Great Lakes Bay Region  
Midland • Bay • Saginaw  
Where Innovation Flows

## ACKNOWLEDGEMENTS

Bay, Saginaw, and Midland Counties wish to thank and acknowledge the many stakeholders who were involved in the development, review, and refinement of the Regional Energy Efficiency, Conservation, and Renewable Energy Strategy, including over 75 people who attended a January 20, 2011 Public Meeting. In particular, the following people offered key initial input regarding regional energy goals and opportunities for collaboration:

Andrew Thibideau, Saginaw Valley Sustainability Society  
Bob Van Deventer, Saginaw County Chamber of Commerce  
Bonnie Bona, Clean Energy Coalition  
David Lyons, Dow Corning  
Denise Mason, Midland County  
Douglas Bell, Saginaw County  
Fred Hollister, Bay Future Inc.  
Harry Leaver, Saginaw Valley State University, Center for Business and Economic Development  
James Lillo, Bay County Road Commission  
Jason Geer, Midland Tomorrow  
Jim Sanders, Bayview Foods  
Kelly Suppes, Saginaw County  
Laura Ogar, Bay County Environmental Affairs and Community Development  
Linda Rivera, Saginaw Transit Authority Regional Services  
Magen Trask, Bay Future , Inc.  
Marc McGill, Saginaw County  
Michael Stoner, Bay Metro Transit  
Monica Duebbert, Mid Michigan Waste Authority  
Phil Newton, Bay City Electric Light and Power  
Richard LaBombard, City of Saginaw  
Robert Redmond, Bay Metro Transit  
Scott Walker, Midland Tomorrow  
Tom Begin, Consumers Energy  
Tom Hickner, Bay Future, Inc.  
Tom Miller, Saginaw Future Inc.  
Veronica Horn, Dow Corning

This Strategy was prepared by



## CONTENTS

Acknowledgements .....	2
Contents .....	3
Introduction.....	4
Background.....	4
Process for developing the GreaT Lakes Bay Regional Energy Strategy .....	5
Great Lakes Bay Regional Energy Goals.....	5
Priority Regional Energy Collaboration efforts .....	6
1. Regional Energy Stakeholder Team.....	6
2. Attracting and Retaining Alternative Energy and energy Efficiency Industry in the Great Lakes Bay Region.....	7
3. Transportation.....	9
4. Support private sector efforts to achieve energy reduction .....	12
5. Support Efforts to Improve building Efficiency and construction of “Green” Buildings in the Region .....	14
6. waste management.....	15
7. Improve Energy efficiency and expand renewable energy deployment in municipal operations .....	17
Strategy Sustainability .....	18
Appendix A : Summary of Public Meeting Comments.....	20

## INTRODUCTION

### BACKGROUND

In early 2010, the State of Michigan Department of Energy, Labor, and Economic Growth, through funding from the Department of Energy (DOE), awarded Michigan communities grants to advance the goals of DOE's Energy Efficiency Conservation Block Grant program (EECBG). The State wanted communities to find ways to reduce the millions of dollars that leave the state due to inefficiencies in our building, transportation, and other sectors, which contribute to high utility and maintenance costs, and environmental degradation.

The Great Lakes Bay communities jumped at the opportunity to develop energy efficiency, conservation, and renewable energy programs that would help the State meet these goals. The communities of Bay, Saginaw and Midland, and their economic development corporations, have been working collaboratively for years to foster and grow the alternative energy sector, particularly the solar photovoltaic, wind industry, and battery industries. Substantial effort and progress has been made in creating a hub of alternative energy manufacturing and deployment in the region. Some key accomplishments include:

- Formation of the Great Lakes Bay Economic Development Partnership and *Solar Advantage* ([MIGreatLakesBaySolar.com](http://MIGreatLakesBaySolar.com)) which is focused on aggressively pursuing attraction of new and expanded solar manufacturing to the region. To date, there has been over \$3 billion of investment in solar manufacturing facilities by companies such as Dow Chemical, Dow Corning, Hemlock Semiconductor, Evergreen Solar, Suniva, and GlobalWatt
- Identification by the Michigan Wind Energy Council of Saginaw Bay and central Lake Huron as a favorable location for offshore wind development
- Investment in several on-shore wind projects including initial plans by Next Era Energy for a 66 turbine 100 megawatt commercial wind park in Bay and Tuscola Counties.
- Dow Kokum and Corvus Energy's construction of a \$665 million, 800,000 square-foot advanced lithium-polymer battery plant in Midland

The Great Lakes Bay communities have developed this Regional Energy Efficiency, Conservation, and Renewable Energy Strategy (Strategy) to enable our communities to build on these existing efforts, and proactively pursue strategies for reducing traditional energy use in our municipal, residential, commercial, and industrial sectors. The Strategy is a key part of the region's planning efforts, and lays the ground work for prioritizing and collaborating on efforts to:

- Conserve and reduce per capita energy use in the region
- Improve the energy efficiency of our buildings and transportation infrastructure, and

- Meet a growing share of our energy demand with alternative energy sources, particularly those produced in the region.

## PROCESS FOR DEVELOPING THE GREAT LAKES BAY REGIONAL ENERGY STRATEGY

The communities of Bay, Midland, and Saginaw Counties began working on efforts to collaborate in the development of a regional strategy in August 2009. A group of municipal and community stakeholders from the region was invited to a meeting hosted by the Counties and Saginaw Valley State University, and facilitated by Shepherd Advisors consulting. The group discussed opportunities for working together on projects to reduce energy use and promote the development and deployment of renewable energy in the region. As a result of that meeting, several of the communities applied for grant funding from the State of Michigan to develop a regional strategy, as well as identify and implement energy efficiency and renewable energy projects in their own communities.

With the grant funding, the communities came back together for a series of meetings to identify specific goals and objectives for energy efficiency and renewable energy, and begin identifying the specific projects or efforts that the communities would collaborate on. In November, 2010, the communities invited a group of stakeholders from throughout the region – representing industry, utility, environmental, waste, transportation, and community planning sectors – to a meeting to further discuss and refine energy goals and objectives for the region. This group (list of attendees included in Appendix A) provided thoughtful and substantive input, and helped prioritize key areas of collaboration.

After further refinement by the community Strategy team, the document was made available to the general public, and the communities hosted a public meeting on January 20, 2011. Over 75 people attended the meeting and provided excellent input on the existing goals and objectives, as well as additional opportunities to include in the strategy. Numerous people also sent written comments on the strategy, with specific suggestions for improvement or offering their willingness to collaborate as the region moves forward in implementing the strategy. A summary of comments received at the public meeting is included in Appendix A.

## GREAT LAKES BAY REGIONAL ENERGY GOALS

Through the process described above, the Great Lakes Bay communities have identified regional energy goals and priority areas of collaboration to help achieve those goals. The Great Lakes Bay partners are committed to working together to reduce energy use and accelerate deployment of renewable energy and energy efficiency technologies, and recognize that achievement of the goals laid out here will require participation and resources from the public, private and non-profit sectors throughout the region.

Specific energy goals for the Great Lakes Bay Region include:

- Achieve significant fossil fuel energy reductions in municipal facilities, fleets, operations, and transit offerings through energy efficiency and renewable energy efforts.
- Serve as a leader for, and support efforts of residents and businesses in the region to reduce their energy consumption through energy efficiency efforts and deployment of renewable energy technologies.
- Foster a renewable energy and energy efficiency market transformation in the region that supports and attracts renewable energy and energy efficiency investment and jobs, increases the value of, and desire for renewable energy and energy efficiency by our residents and businesses, and increases local access to best in class renewable energy and energy efficiency technologies.

## PRIORITY REGIONAL ENERGY COLLABORATION EFFORTS

In order to achieve the regional energy goals, the Great Lakes Bay communities have identified several priority areas of collaboration. The efforts proposed below include short term and longer-term activities, and will require varying level of public and private sector resources. The communities have focused on ambitious, yet achievable objectives, and specifically identified areas that build on existing efforts within and between communities.

### 1. REGIONAL ENERGY STAKEHOLDER TEAM

Working together as a region on energy reduction and renewable energy generation requires communication, coordination, and leadership among the Great Lakes Bay communities. While there is already a significant amount of collaboration on individual efforts and issues, there is no single coordinating effort that is tracking energy efficiency and renewable energy efforts in the region.

#### 1.1 ESTABLISH A REGIONAL ENERGY STAKEHOLDERS ALLIANCE/TEAM THAT WOULD COME TOGETHER ON A REGULAR BASIS TO DISCUSS AREAS OF COLLABORATION, HELP GUIDE PLANNING AND IMPLEMENTATION OF REGIONAL ENERGY PROJECTS, AND BE A RECOGNIZED SOURCE OF INFORMATION AND COORDINATION ON REGIONAL ENERGY ISSUES

In order to maintain momentum in pursuing the goals and efforts included in the Strategy and effectively track progress, a team of regional stakeholders must be charged with continuing to champion regional collaboration on energy efficiency and renewable energy. The Regional Energy Team should help identify opportunities and pursue

funding for collaborative energy projects, and be a resource for coordinating multi-jurisdictional grant applications.

To be most efficient with resources and time, the Regional Energy Team should be established as a subgroup or part of an existing regional group such as the Great Lakes Bay Alliance. The group should meet at least quarterly, and identify a team “lead” each year.

Potential Partners: Saginaw County, Midland County, Bay County, City of Saginaw, Bay City, City of Midland, other cities/townships in the region, Michigan State University Extension, Great Lakes Bay Alliance, community groups/non-profits representing housing, waste, transportation, and environmental interests, industry representing renewable energy manufacturers, utilities, large energy users, or other energy service providers.

Timeframe: Each community will identify 2 -3 municipal, business or community representatives by May, 2011. The Energy Team will begin meeting by June, 2011.

Potential Cost Range: staff time

## 2. ATTRACTING AND RETAINING ALTERNATIVE ENERGY AND ENERGY EFFICIENCY INDUSTRY IN THE GREAT LAKES BAY REGION

The Great Lakes Bay communities have made significant progress over the last 5 years in aggressively attracting alternative energy industry (solar, wind, and advanced battery) to the Region through the Great Lakes Bay Economic Development Partnership. This Strategy builds on those efforts, and outlines key priorities for collaborating on support marketing, incentive programs and policies, and deploying renewable energy and energy efficiency technologies to show leadership and help accelerate market penetration. U.S. market share for manufacturing of renewable energy (e.g., solar PV and wind) and energy efficiency (e.g., compact fluorescent light bulbs, appliances) technologies faces increasing challenges from other countries, and creating and maintaining competitive geographical advantages is a necessity for holding and gaining a greater share of the market. The objective of the collaboration is for the Great Lakes Bay region to be known globally for its substantial number of renewable energy and energy efficiency projects and its significant position in the renewable energy/energy efficiency manufacturing market.

Priority areas for collaboration include:

- 2.1 SUPPORT STATE OF MICHIGAN EFFORTS TO CREATE GREATER MARKET SHARE AND DEPLOYMENT OPPORTUNITIES FOR RENEWABLE ENERGY BY MAINTAINING AND/OR INCREASING THE STATE RENEWABLE PORTFOLIO STANDARDS (RPS) AND DEVELOPING A FEED IN TARIFF (FIT) SYSTEM.

The State passed PA 295 in 2008, which included a Renewable Portfolio Standard. A Renewable Portfolio Standard is a market-driven policy that increases the production, use, and availability of renewable energy sources. It requires the state's utilities, alternative retail suppliers, electric cooperatives, and municipal electric utilities to generate 10% of their electricity sales through renewable energy by 2015. The Great Lakes Bay region supports this goal because it encourages investment in renewable energy technologies, and helps create a stronger market for renewable energy technology manufacturing in the Region. The Regional partners will support efforts by the State and utilities to meet the RPS goals.

In addition, many of the region's key renewable energy industries are advocating adoption of a Feed-In-Tariff system in Michigan, which will accelerate deployment of the technologies. FITs guarantee that those who set up renewable energy systems are paid a higher price per kilowatt hour for renewable energy than the traditional market prices, with the cost of the subsidy built right into the rate structure for the utility. FITs increase deployment of renewable energy technologies by allowing the renewable energy producers to more quickly earn a return on their investment. Michigan's PA 295 did not include a comprehensive FIT system, and through their collaboration, the Great Lakes Bay Region will support efforts by the State and its utilities to augment the current programs to include FITs.

*"Game-changing" incentives [such as FITs] for Michigan consumers are needed. Incentives to attract solar businesses themselves, such as tax breaks, are not enough."*

**Stephanie Burns, CEO of Dow Corning Corporation**

(From Crain's Business Detroit, "Feed-in tariffs would help expand Michigan solar industry, execs say," 11/21/2010)

Potential Partners: State of Michigan Public Service Commission, renewable energy industry representatives, statewide renewable energy-related organizations (e.g., Great Lakes Renewable Energy Association)

Timeframe: ongoing

Potential Cost Range: staff time

2.2 PROVIDE CONTINUED AND EXPANDED SUPPORT FOR BAY FUTURE, MIDLAND TOMORROW, AND SAGINAW FUTURE TO CONTINUE AND EXPAND EFFORTS TO ATTRACT AND RETAIN RENEWABLE ENERGY BUSINESS TO THE REGION.

Building on the significant success of these organizations to develop the renewable energy industry in the region, the communities commit to continue support for the economic development agencies to:

- Pursue marketing and attraction efforts of new global renewable energy manufacturers to the Great Lakes Bay Region
- Support state programs and policies that assist existing renewable energy manufacturers in their efforts to expand in Michigan and the Great Lakes Bay Region
- Increase support for small to mid-sized manufacturers in the Great Lakes Bay Region to diversify into the renewable energy manufacturing industry.
- Create expanded opportunities for alternative energy workforce training, such as Delta College’s Solar Manufacturing Fast Start and Wind Technology programs, in order to create a highly-qualified, regionally-based talent pool for renewable energy manufacturing and project development.

Potential Partners: Cities and Counties of Saginaw, Bay, and Midland; Saginaw Future Inc.; Midland Tomorrow; Bay Future Inc.

Timeframe: ongoing

Potential Cost Range: moderate

### 3. TRANSPORTATION

The Great Lakes Bay Communities will work together on transportation efforts that reduce fossil fuel-based energy use in the region. The three (3) County Transit Authorities are already working together to address regional transportation issues that reduce costs, expand services and find system efficiencies. These efforts should be built upon to provide strong transportation services to the region that are focused on reducing our use of fossil fuels, and finding long-term funding solutions for transit and road maintenance investments in a changing transportation landscape.

Priority areas for collaboration include:

3.1 EXPLORE OPTIONS FOR INCREASING MASS TRANSIT AND CROSS-COMMUNITY COMMUTER TRANSIT SERVICES, SUCH AS DEVELOPMENT OF A COMMUTER LOOP BETWEEN THE 3 COUNTIES, STANDARDIZING SERVICES AND FARE STRUCTURES, AND UTILIZING BUS RAPID TRANSIT (BRT) OR LIGHTRAIL.

Finding opportunities to increase public mass transit options for our communities will help reduce single occupancy vehicle trips and their associated energy use (and greenhouse gas contributions). Many communities throughout Michigan and the nation

are working together across municipal boundaries to not only offer expanded transit options, but educate the public about the benefits and ease of mass transit options.

The communities, through the Transit Authorities, will evaluate mass transit options by looking at best practices from other communities, identifying key user needs, considering costs and barriers to implementation, and recommending plans of action for more integrated and expanded transit services to leadership in the three communities.

Potential Partners: Midland, Saginaw, and Bay Transit Authorities, Clean Energy Coalition

Timeframe: discussions on these issues are already underway within and between the Transit Authorities. The groups should come together with initial evaluation and recommendations regarding options by the end of 2011.

Potential Cost Range: moderate (operational changes) to very high (infrastructure changes)

---

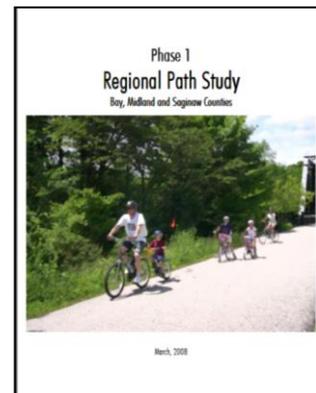
### 3.2 SUPPORT IMPLEMENTATION OF THE REGIONAL NON-MOTORIZED TRANSPORTATION/PATHWAYS PLAN THAT PROMOTES PEDESTRIAN AND BICYCLE-FRIENDLY TRANSPORTATION ALTERNATIVES AND COMMUNITY DEVELOPMENT

The region has already developed a [Tri-County Regional Pathways plan](#) and all three Counties have non-motorized transportation plans. The communities should support the implementation of measures identified in these plans to create a region that offers substantially improved options for transportation by pedestrians and bicycles. These efforts will reduce transportation energy uses in the region and reduce out contribution to global climate change.

Potential Partners: Bay, Saginaw, and Midland Counties; Michigan Department of Transportation, Bay Region, BACF Riverwalk/Railtrail, Friends of the Pere Marquette, JCF/WIN

Timeframe: ongoing

Potential Cost Range: low (operational and outreach) to high (infrastructure investments).



---

### 3.3 CREATE A REGIONAL CAR SHARING/RIDE SHARING PROGRAM TO ENCOURAGE CARPOOLING AND REDUCE THE NUMBER OF SINGLE OCCUPANCY VEHICLE TRIPS IN THE REGION

Transit Authorities will evaluate options for creating a regional car/ride sharing program in the region such as “zip car” or other ride sharing networks. Many communities across the state and country are investing the purchase of vehicles for car

share programs, or are hosting and sponsoring ride share networks through existing or new social media-type programs. The communities will explore best practices from other regions and make recommendations to leadership within Great Lakes Bay about options for implementing car or ride sharing programs.

Potential Partners: Midland, Saginaw, and Bay Transit Authorities, Clean Energy Coalition; Saginaw Valley State University; Michigan Department of Transportation

Timeframe: Evaluate options and make recommendations to regional leadership by end of 2011. Implementation is dependent on available funding.

Potential Cost Range: moderate to high

---

3.4 DEVELOP AN ALTERNATIVE ENERGY FUEL PLAN AND PROGRAM FOR THE REGION'S FLEETS THAT WILL REDUCE GREEN HOUSE GAS EMISSIONS ASSOCIATED WITH TRADITIONAL FOSSIL FUELS (E.G., BIOFUELS, ELECTRIC VEHICLES, ENGINE CONVERSION).

There are significant options and occasional grant funding available to help communities reduce fossil fuel use and greenhouse gas emissions by implementing infrastructure for and utilizing alternative fuels or engine technologies. The Great Lakes Bay communities should cooperatively evaluate options and develop a plan for reducing fossil fuel use in its public transit, waste collection, school bus, and/or utility fleets.

Potential Partners: Saginaw, Midland, and Bay Counties (Transit and Waste Authorities, Purchasing, Parks and Recreation), Midland Public Schools, Bay City Public Schools, Saginaw Intermediate School District.

Timeframe: 2012 - 2013

Potential Cost Range: moderate to high (depending on availability of grant funds)

---

3.5 CREATE, PLAN, AND INVEST IN INFRASTRUCTURE FOR SIGNIFICANT DEPLOYMENT OF ELECTRIC VEHICLES THROUGHOUT THE REGION, INCLUDING INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS, AND WORKING WITH AUTO COMPANIES TO FOCUS MARKETING AND ROLL OUT OF ELECTRIC VEHICLES IN THE REGION.

Several communities in the region, including Bay City, have already begun establishing public charging stations to support use of electric vehicles. The Regional Energy Team will explore funding opportunities for purchase and deployment of electric vehicle charging stations to build on these efforts, and reach out to the auto industry to discussion options for marketing and roll out of electric vehicles in the region.

Potential Partners: Cities, Townships, and Counties in the region (those who are interested in installing charging facilities), the State of Michigan, General Motors, Ford, Consumers Energy, electric vehicle charging station vendors

Timeframe: Work has already begun by Bay City. Communities should work with industry and utilities, and pursue funding options in 2011. Installation of 2 – 3 public charging stations completed by 2013 (depending on funding availability).

Potential Cost Range: low to moderate

#### 4. SUPPORT PRIVATE SECTOR EFFORTS TO ACHIEVE ENERGY REDUCTION

In addition to reducing municipal energy use and deploying renewable energy technologies within public facilities and fleets, the Great Lakes Bay Region partners will collaborate to support private sector efforts to achieve fossil-fuel energy reductions. Key areas of collaboration include:

##### 4.1 CREATE A FUNDING POOL THAT WILL LEVERAGE EXISTING UTILITY, STATE, AND COMMUNITY GROUP EFFORTS TO PROVIDE REGIONAL BUSINESSES COMPLETE ENERGY AUDITS AT THEIR FACILITIES.

The Counties will work together to seek funding through grants, partnerships with local utilities or other companies, or other funding sources, to create a funding pool that would be available to regional commercial business owners to complete energy audits at their facilities that will help them to identify potential energy and cost savings.

Potential Partners: the State of Michigan, U.S. federal agencies (e.g., Department of Energy, Environmental Protection Agency), Consumers Energy, SVSU, banks/credit unions, Michigan Saves

Timeframe: Explore options, begin discussions with potential partners, and seek funding in 2011.

Potential Cost Range: moderate

##### 4.2 HOST A REGIONAL ENERGY SUMMIT TO HELP EDUCATE RESIDENTS AND BUSINESSES ABOUT ENERGY EFFICIENCY OPPORTUNITIES, INCLUDING RELEVANT TECHNOLOGIES, REBATES, SERVICE PROVIDERS, AND PARTNERS.

Several other communities in Michigan have organized and hosted community energy summits that bring together residents, businesses, utilities, energy technology vendors, and educators to showcase, teach and connect these resources and advance the community's knowledge of energy efficiency and renewable energy options for their homes and businesses. There are utility rebates, state loan programs, and other funding sources for businesses and homeowners to install energy efficiency and renewable

energy technologies, but many people simply do not know what technology options are available or appropriate for their needs. A regional energy summit will help educate the community about these opportunities, accelerate private sector deployment of these technologies, and grow local green/energy-related businesses.

Potential Partners: Chamber of Commerce (Regional Business Expo), SVSU, MSU Extension, Homebuilders Association, local energy-related businesses (e.g., energy efficiency contractors, solar, wind, geothermal or other renewable energy technology companies), Bay, Midland, and Saginaw Counties

Timeframe: begin planning in early 2011 and host summit by end of 2011 or early 2012, possibly in conjunction with the Chamber of Commerce’s Regional Business Expo or the Homebuilders Show hosted at SVSU.

Potential Cost Range: staff time, low to moderate

---

#### 4.3 REGIONAL ENERGY EFFICIENCY AND RENEWABLE ENERGY INFORMATION WEBSITE

The communities will support development of a central Great Lakes Bay Energy Conservation and Renewable Energy website that provides an overview of the communities’ energy efficiency and renewable energy efforts, provides links to each communities’ municipal web page for greater details on relevant programs, gives information on utility and other incentives available to businesses and residents with links to those pages, and provides announcements of upcoming regional energy events or programs.

Potential Partners: Bay, Saginaw, and Midland Counties and Cities, SVSU, Saginaw Future, Bay Future, Midland Tomorrow

Timeframe: mid-2011

Potential Cost Range: staff time, low

---

#### 4.4 CREATE A “LOANER” PROGRAM FOR ENERGY EFFICIENCY AND/OR RENEWABLE ENERGY ASSESSMENT EQUIPMENT

The communities will partner with local organizations to purchase and make available equipment which assists residents and businesses who are considering energy and/or renewable energy upgrades in evaluating the efficiency of their homes and current equipment, and/or the potential of their location for renewable energy technology deployment. Other communities, including Bangor Township, have operated similar programs and made available to their residents and businesses equipment including thermal energy imagers, wind anemometers, and “kill a watt” energy monitors. These types of equipment are only needed on a periodic or one-time basis by most users, and

are expensive to buy individually. Creating a “loaner” program will help reduce the overall costs of evaluating and implementing energy efficiency and renewable energy projects by community members.

Potential Partners: regional libraries, MSU Extension, Bay City Electric Light and Power, Consumers Energy

Timeframe: begin exploring partnerships in early 2011, purchase equipment and make program available by 2012.

Potential Cost Range: minor to moderate

## 5. SUPPORT EFFORTS TO IMPROVE BUILDING EFFICIENCY AND CONSTRUCTION OF “GREEN” BUILDINGS IN THE REGION

### 5.1 PROMOTE THE DEVELOPMENT AND USE OF GREEN HOME BUILDING PRODUCTS IN THE REGION, THROUGH EDUCATION AND CREATION OF RESIDENTIAL DEMONSTRATIONS OF ENERGY EFFICIENT AND/OR NET ZERO HOMES.

The field of green home building is rapidly advancing and there are numerous building products and processes that can result in significant energy savings and/or integrated generation of renewable energy. The Counties should work proactively to support green building practices and help demonstrate the cost effectiveness and aesthetic characteristics of these types of home.

Cobblestone Homes and Dow Advanced Materials’ recently built and showcased their Net Zero Energy Home in Bay County. The communities would like to build on this effort, and expand it to include additional homes in other parts of the Great Lakes Bay region or creating a subdivision of similar homes around the current Bay County property which utilize locally manufactured distributed renewable energy technologies such as small wind, solar PV systems, solar thermal technologies, and geothermal systems, and cutting edge energy efficiency technologies. Providing additional examples to community members about the options, aesthetic appeal, and realities of building energy efficient homes will help create market penetration for green building technologies and demonstrate the significant energy and cost savings that can be achieved by homeowners.

The communities, in partnership with regional businesses that provide energy efficiency and renewable energy technology and services, will work together to explore options for obtaining funds to expand this effort, integrate an innovation center or subdivision as part of community action agencies’ weatherization processes, and/or create education and technical training opportunities around the construction of energy efficient homes.

Potential Partners: Economic Development and Planning Departments from Cities and Counties in Midland, Bay, and Saginaw Counties; Saginaw County Community Action

Committee; Mid-Michigan Community Action Agency; Cobblestone Homes, Dow Chemical, local building suppliers.

Timeframe: Initial partner discussions and planning in 2012.

Potential Cost Range: high for participating partners, but with strong return on investment (ROI).

---

5.2 CREATE A REGIONAL POLICY THAT PROMOTES AND RECOGNIZES RENOVATION OR CONSTRUCTION OF “GREEN” BUILDINGS WITHIN THE REGION.

Several communities in Michigan and throughout the country have passed policies or zoning ordinances that reward private sector construction projects which achieve Leadership in Energy and Environmental Design (LEED) or other green building strategies (e.g., Energy Star) in new construction projects. These policies range from offering financial incentives such as rebates, allowing for other construction incentives such as increased density, or creating public awards programs, and have been successful in stimulating private sector efforts to integrate energy efficiency and other green building techniques into new construction and building renovation. Developing a regional green building policy, which could be adopted by participating local communities, will allow the Great Lakes Bay communities to be leaders in community green infrastructure, and provide consistency for local builders in terms of green building policies.

Potential Partners: Bay, Saginaw, and Midland Counties and Cities, non-profit groups such as Michigan Municipal League, Homebuilders Association, local green builders

Timeframe: late 2011

Potential Cost Range: staff time

---

6. WASTE MANAGEMENT

Given the substantial energy savings opportunities from reducing waste, and the potential for generating energy from waste, the Great Lakes Bay region will work together to reduce waste generation and broadly deploy technologies to convert biomass, landfill gas, and other waste materials into energy across Midland, Saginaw, and Bay Counties. Areas of potential collaboration include:

---

6.1 COLLABORATE ON WASTE MANAGEMENT PLANS THROUGHOUT THE GREAT LAKES BAY REGION TO INCREASE EFFICIENCIES, LEVERAGE RESOURCES, AND BETTER CAPITALIZE ON OPPORTUNITIES FOR WASTE ENERGY GENERATION

Waste management agencies throughout the regions already run individual waste collection and recycling programs for their participating communities. In order to expand program effectiveness and reach and reduce operational costs, waste management organizations throughout the region will explore opportunities for collaborating on specific programs or offerings, such as recycling events, shared fleets and/or fleet maintenance facilities, increasing the scope and availability of curbside recycling throughout the region, and special collection offerings. The communities will meet one or two times a year to discuss opportunities for collaboration, and as needed for special projects or collaborative efforts. Greater collaboration in ways that increase recycling and opportunities for region-wide waste reduction will help increase jobs, reduce greenhouse gas emissions from area landfills, and allow for leveraged investment in recycling and advanced waste management facilities.

Potential Partners: Saginaw County, Bay County, Midland County, local cities and townships, local recycling organizations

Timeframe: community waste management agencies will begin cross-region meetings 1-2 times/year, beginning in late 2011.

Potential Cost Range: staff time

---

6.2 SPONSOR AND HOST REGIONAL RECYCLING EVENTS FOR TARGETED MATERIALS SUCH AS ELECTRONICS OR FLUORESCENT BULBS, AND INCREASE REGULAR RECYCLING SITES FOR CFL BULBS THROUGHOUT THE REGION

Several of the individual communities with the region offer special types of recycling events and increasingly community businesses are offering expanded opportunities for recycling CFLs. The Mid Michigan Waste Authority has been piloting a program for small businesses in several communities to recycle their fluorescent tube and bulb lighting as well, and plans to expand the program to more than 10 communities throughout Saginaw County.

Bay, Midland, and Saginaw Counties (and their respective cities and townships) will work together to build on existing programs and offer expanded opportunities for regional recycling of targeted materials such as electronics, construction materials, and lighting. The communities will evaluate and implement efforts to host recycling events and partner with local hardware and other commercial outlets to offer fluorescent bulb and tube recycling in their stores.

Potential Partners: Saginaw, Bay, and Midland County Waste Management/Recycling teams, local hardware stores that sell CFLs, community service groups (e.g., Midland Volunteers for Recycling)

Timeframe: ongoing

Potential Cost Range: low

## 7. IMPROVE ENERGY EFFICIENCY AND EXPAND RENEWABLE ENERGY DEPLOYMENT IN MUNICIPAL OPERATIONS

### 7.1 CREATE A REGIONAL AGGREGATED PURCHASING PROGRAM FOR ENERGY EFFICIENCY PRODUCTS

In order to encourage municipalities in the region to make energy efficiency upgrades in their facilities and reduce the costs for upgrades, participating communities will create a regional aggregated purchasing program for common, high energy consuming products. The communities will work together to jointly issue a request for proposals/request for bids for up to 5 different energy-saving technologies or services (e.g., Energy Star copiers and printers, light fixtures and ballasts, HVAC components) in an effort to get bulk purchasing prices and make the necessary upgrades more affordable for each community. The communities will select products and services and negotiate standing contracts with vendors and service providers which will be available for all participating communities in the region.

Potential Partners: Counties and cities within Bay, Saginaw, and Midland Counties, energy efficiency technology and service vendors

Timeframe: initial discussions and planning in late 2011, program implementation in 2012

Potential Cost Range: staff time

### 7.2 DEVELOP A MODEL GREEN PURCHASING POLICY TO BE ADOPTED BY COMMUNITIES IN THE GREAT LAKES BAY REGION

The Regional Energy Team will draft a model green purchasing policy for municipal operations that sets out a directive for municipalities to purchase “green” (e.g., energy star or recycled content) products when feasible in order to reduce their energy consumption and contribution to global climate change. The Regional Energy Team will make the model policy available to communities within the region and encourage individual communities to adopt the policy.

Potential Partners: Counties and cities within Bay, Saginaw, and Midland Counties

Timeframe: model policy drafted and provided to communities by end of 2011

Potential Cost Range: staff time

### 7.3 COMMUNITIES WILL IMPLEMENT ENERGY EFFICIENCY RETROFITS AND RENEWABLE ENERGY PROJECTS AT MUNICIPAL FACILITIES TO REDUCE ENERGY USE AND COSTS

The Cities and Counties of Bay, Saginaw and Midland have all been making significant efforts to implement energy efficiency upgrades throughout their municipal complexes over the past several years. In 2010 alone, each of the communities received EECBG funds to deploy energy efficiency upgrade and/or renewable energy projects, and have already begun or completed construction on these projects. For example, Bay County is installing LED lighting indoors and outdoors at several municipal facilities, deploying a heat recovery system at the Bay County Civic Arena, and is installing wind turbines at the juvenile home and the Civic Arena. Midland County is installing a 20kW, made-in-Michigan solar energy installation on the roof of the Pinecrest Residential Facility. Using grant funds, Saginaw County completed energy audits on eleven buildings and is in the process of finalizing plans for over \$2 million in energy efficiency upgrades to its municipal facilities. Building on these efforts, the Great Lakes Bay Region communities have the capacity and momentum to continue evaluating opportunities and implementing projects for additional energy saving efforts as time and resources allow in the coming years.

Potential Partners: Counties and cities within Bay, Saginaw, and Midland Counties

Timeframe: ongoing

Potential Cost Range: moderate to high

## STRATEGY SUSTAINABILITY

The goals of this Strategy are to reduce municipal, residential, and private sector energy use, and find greater ways to deploy and utilize renewable energy to supply the region's energy needs. The specific objectives and efforts identified above are ambitious and will require significant cooperation, dedication of staff and community time, and of course fiscal resources. All of these can be limiting to the Region's ability to accomplish its goals, but the Strategy now provides the framework for prioritizing efforts, working collaboratively to pursue funding and share resources, and yield greater opportunities for partnering with the state and federal government.

Based on the timeframes for each effort identified in this strategy, the communities will identify appropriate partners and pursue individual efforts as resources allow. The Regional Energy Team will help set direction, bring together relevant parties, monitor the communities' progress in pursuing these efforts, and assessing energy and cost saving impacts of the efforts

identified in this strategy. The Regional Energy Team, with support from Bay, Saginaw, and Midland County and economic development agency staff, will provide bi-annual updates on progress in achieving the Strategy goals to the leadership and public of the 3 Counties.

As progress is made in achieving energy conservation and renewable energy goals, the Great Lakes Bay partners will assess efforts and refine the Strategy to meet current goals and community needs.

## APPENDIX A: SUMMARY OF PUBLIC MEETING COMMENTS

Below are specific comments from public meeting participants regarding the draft Great Lakes Bay Regional Energy Efficiency, Conservation, and Renewable Energy Strategy. When responses were provided directly at the time, the name of the respondent and their comments are also provided.

1. What was the impetus for all of this effort? Is it that green building and clean energy are buzz words, was money available – why did this all get going?
  - Response: A lot of work was already ongoing in these areas. There was plenty of interest by the communities, and when the funding came up it was a natural fit
2. Is the state going to pass a Feed in Tarriff? If not, renewable energy businesses will never be able to fully grow
  - Encouraged everyone to take a look at [www.SRECTRADE.com](http://www.SRECTRADE.com)
  - Response from Jeff Mayes (former State Representative) – there is a modest one in the current law under the net metering component. It continues to be discussed at the MPSC.
3. Consumers Energy put in a high pressure gas line across their farm back in the early 1900s, but they never connected individual lines. What would happen if they did that? We should be expand our natural gas lines throughout the region.
  1. Response from Tom Begin, Consumers Energy: they have to balance the cost of extending lines with the impact on existing customers' rates (rates go up to serve more and more people). There is generally a cost to the homeowners/business owners. He would be happy to talk with him afterward.
4. Section 1.2 of the Strategy - support policies for RE manufacturers – this should include support language for raising the State's Renewable Portfolio Standard (RPS) to 25% as soon as possible
  - Large energy corporations should be paying the avoided costs from upgrading old coal facilities – include something like avoided costs that could go to renewable energy entrepreneurs
  - The legislators won't do it – but the Governor and his Public Service Commission might. Turn on the “green switch”
5. Would like to see more emphasis on energy efficiency like we did during the 70s. He built a 5,000 square foot energy efficient home that heats and cools for \$800/year.
  - In order to make progress, we have to have contractors who are willing to build energy efficient houses, and regulators to make sure that they are doing it right.
  - We could have companies that provide thermal imaging so people can really see where their house is leaking energy.
  - The current Regional strategy doesn't play this type of effort up enough.

- Response: Rob Busby – ICF International, Program Manager for Consumers Energy
    - They are launching Home Performance with Energy Star to get at some of this. They have 50 contractors enrolled in the program.
    - Want to find ways to get into the communities by working with home owners associations and other groups
6. Agrees with previous comments that we need to improve the performance of our homes
    - The commentor brought a thermal imager with him so people can check it out and see what it is. It cost \$2,000
  7. Green Building is such a big issue – contractors can integrate passive solar and make better energy decisions when they are building and renovating buildings
    - What if we required energy audits as part of the building permit process – before certification of completion. Don't know if it's legal, but if we could do it, it could really help stimulate the incorporation of green building technologies and techniques.
  8. Our recycling efforts in the region are not where they should be. There is so much more that could be done, and this is a critical effort. Recycling needs to be easier and more widely available, and the Strategy should keep this as a priority, maybe with more specific suggestions.
  9. The statement that we need to reduce overall energy use in the region isn't the right way to approach this – we need to be more efficient with our energy use on a per capita basis. We want our region to grow and that means using more energy overall, just being more efficient with it.
    - We also need to focus on the economic development opportunities related to renewable energy. That doesn't just mean attracting, it means using Economic Gardening to grow the local businesses we already have and help them to expand and succeed.
  10. Charter Township of Bangor formed a Green Team. They've talked about:
    - Incandescent bulb buy backs (like gun buy backs)
    - Energy audits on a township-wide basis
    - Recycling – varies from community to community. Hates the whining about how there are no markets for these materials. Communities need to push and force the issue and markets will be created. Increase the menu of available materials to recycle
    - Funding is a big issue for all of these
  11. It's great to do all of this energy stuff if its saving us money, but not just to be trendy. Need to do what's wise, not just sounds good
  12. Is there an actual pool of money for these efforts?
    - Response by Laura Ogar, Bay County: Not really other than ongoing efforts. The idea is that having a strategy will position the region to go after future sources of money for some of these efforts – both public and private

13. How is the term efficient defined? Government shouldn't decide what's efficient, the market should decide that.
14. Agrees with previous comments that recycling needs to be expanded. It would also be good to see a study of what actually gets recycled – what the process is.
15. In terms of efficiency, we have to recognize future costs that are invisible to us now, recognize that energy will only continue to get more expensive. The Strategy is a wonderful opportunity to work together to innovate, conserve, and build a great community.
16. Commentor said she helps companies find energy savings in their operations by looking at your existing bills to save and finance energy efficiency upgrades. She is excited to hear about this effort and would like to help look at ways to coordinate among communities and save money.
17. We need to watch out how much control we're giving our government
18. Curious about where people are in terms of energy. Asked the crowd how many people:
  - Use some kind of renewable energy at their home/business? Several
  - Water recapture cisterns? None
  - Garden for our food? SeveralHe supports ways that individuals can make changes in their own homes.
19. It is important that we make these decisions (energy goals/strategies) by the many, not the few. Everyone should continue to be active in their local communities on these issues.
20. This Strategy is a good start, but we need to include more tangible goals. Why not, for example, have RPS for our region of 10% of our energy use, and a goal to reduce overall energy used in our region by 10% through efficiencies (not inhibiting economic growth). Make these more policy goals, and then both municipal and private sector stakeholders can respond in ways to meet that.
21. It is great to hear both sides of this conversation and have the opportunity to come here. We need to keep in mind common sense though. We are still in severely hard economic times. If we don't have the money right now, we might have to wait on some of these things. This doesn't mean we don't keep advancing the technology or trying to reach for it, but can't use money when we don't have it.
22. There is more government involvement in our lives and wallet than there should be. We should be able to make choices and educated decisions.
23. Its great that there are energy efficiency and renewable energy options, but don't want government in our house.

24. What do you do when grant funding runs out and you have all these groups put together and then have to disband them? There shouldn't be any more regulations or government telling people what to do.
25. Pursuing energy efficiency is okay, but windpower is not reliable like coal or other fossil fuel plants. Can't shut those fossil fuel plants down, you're not saving CO2 and there are bird kills associated with wind turbines. There are also sound issues, and they drive the wildlife out of there. Windpower costs much more in Germany and California than fossil fuel plants – let's not jump on the bandwagon just because it's popular.
26. Wind turbines only work 35% of the time, not a good investment
27. It's not that we are opposed to what's being recommended, we just have to be wise and find the things that are cost effective and payback quickly. We should focus on finding ways that people can afford these things now.
28. While we're looking for new ideas and outcomes, we should also look back at what has worked. We need to look at what we're driving for instance. We're driving 6 passenger cars with bigger horsepower that uses a ton of fuel. We don't need all that waste. We also changed our speed limits back up to 70 miles/hour. Now we waste more gas. The cost of building the Consumer's Energy plant is going to be really high, and we are going to be paying for it. There are other poisons coming out of those plants. It doesn't make sense.
29. There are opportunities to look at all sorts of energy platforms, not just 1. We need to be thinking about what our grandkids need – we need to be focused on buying local – whether that's manufactured parts, food, or energy .
30. What do we need to do to raise our RPS to 25%?
31. We should catalogue the needs and wants of the communities in terms of energy efficiency and renewable energy. A lot of these things are going to take a long time, and just a regional approach may not even be enough – it might require state and federal involvement. Transportation is a good example. We may need a regional transportation authority. He would also like to know more about the status of our electric grid, and what the region is going to do to support efforts to upgrade for smart grid and net metering
32. We have to have the government involved because they make the wheels turn. In Bangor Township they have a Green Team that is a diverse group. They have been able to do a lot of things locally to make a difference – selling rain barrels for example.
- He's made upgrades to his own home and has reduced his energy – changed lights, put power saver on his meter box.
  - Their group believes that through education and showing people what works you can make a big difference. This requires bringing everyone together – government, education, researchers, homeowners.

- Also, we need to change things that get in the way. For example, right now property taxes can be increased on a home that puts in a renewable energy technology. It punished them for making a good choice.
- Recycling – there are a lot of alternatives, and you have to be able to educate people.
- They had an energy expo in their township and people were so appreciative. It was a great way to educate people. They also offer a kilowatt meter that their community members can borrow.

33. Just a comment on the Transportation section, specifically with regard to those “road based” items, automobiles, buses, waste disposal vehicles, etc. Although we support and commend this effort, we believe part of the strategy should include support, “lobbying”, commitment to finding a solution to secure long term road funding. As vehicles get “greener”, our (and all other road agencies that depend on the gas tax) revenue decreases. But, the energy efficient vehicles still need decent roads to travel on. Without a change in the way road maintenance revenues are generated, “going green” will result in road agencies “seeing red” and the public ultimately losing. We realize this may be outside what this document is trying to define, however, we believe it is imperative both are discussed and implemented concurrently. You cannot have one without the other.”

34. Is it just a coincidence that the Strategy is so close to the United Nations’ Agenda 21?

Response (Shanna Draheim, Shepherd Advisors): Yes. This is not a copying of that document. But some of the ideas in Agenda 21 for addressing energy issues are commonly used by communities, states, etc.

#### Closing:

Laura Ogar, Bay County Director Environmental Affairs and Community Development thanked everyone for coming and providing input. She re-affirmed that the Strategy is in no way meant to imply increased government regulation or government intrusion in individual’s homes – it is a framework for how the community can work together. She asked whether having future forums to talk about some of the issues raised tonight would be of interest and there was agreement that it would be great.