

## History

- September 2008 – City EDA and Bruce Carman identified a potential niche in renewable energy possibilities.
- October 2008 – An inter-disciplinary project team was developed working with local energy experts.
- October 2008 – Grant Submitted to MN Pollution Control Agency and Iron Range Resources to help determine the feasibility of various renewable energy sources: Biomass/Binary, Wind/Solar, and Algae/Biodiesel.
- June 2009 – Grant approved and contracts were written with Dr. Mike Mageau, UMD, for the Wind/Algae studies; Chuck Hartley, LHB, for the Biomass/Binary study; and Bruce Carman for project coordination.
- August 2009 – Biomass/Binary study completed with a Combined Heat and Power (CHP) plant and Pellet Facility identified.
- September 2009 – Began doing research and development on sustainability of the biomass raw materials on a local, state, and federal level with specific research within a 50 mile radius of Silver Bay. Submitted multiple grants to assist in funding of designing and permitting of a CHP/Pellet Facility. Identified potential investors in the project.
- January 2010 – Identified unique concept of algae production within greenhouses with wind funneling.
- March 2010 – Identified Produce and Fish Production to be incorporated into greenhouses.
- March 2010 – Attended Day at the Capital meeting with Legislators to help with funding for design/engineering of the CHP/Pellet Facility and Bio-Energy Facility (Greenhouse).
- March 2010 – Awarded funding through Coastal Program to develop Land-Use Planning in the park.
- April 2010 – Awarded funding through the Legislators for Bio-Energy Facility.

## Timeline

The timeline is dependent upon the various funding sources, but will most likely be multiple years out.

## Thank You

The City Council and EDA would like to thank you for your interest in the Eco-Industrial Park project. We recognize that this is not only an innovative concept, but a creative economic development strategy. Our overall goal is to prepare for our City's future in order to maintain a quality of life we have become accustomed to for all current and future generations. Information will be provided through the City Newsletter - "Hot Topics", the City Website, and/or informational meetings. As always, you are welcome to contact Elected Officials, Appointed Board Members, or the City Administrator if you have any questions.



**City of Silver Bay**  
7 Davis Drive  
Silver Bay, MN 55614  
(218) 226-4408

## City of Silver Bay

## Silver Bay Eco-Industrial Park

Findings from feasibility studies funded by MPCA and IRR to identify development strategies for an integrated renewable energy production system.

218-226-4408

## Mission Statement

To network businesses to work with each other and the Silver Bay Community in order to create and diversify living wage employment by improving resource productivity, eliminating pollution and expanding markets through renewable, sustainable energy development.

## GOALS/OBJECTIVES

1. Create an Eco-Industrial Business Park that is self sustainable using heat and power generated from renewable energy production systems that are locally owned.
2. Create economic development clusters that network businesses and industries so that one business' waste is another industry's feedstock.
3. Create opportunities that utilize existing natural resources within a 50 mile radius of Silver Bay while maintaining the integrity of our North-shore environment.
4. Create living wage jobs.
5. Diversify the employment base while increasing the tax base.
6. Support sustainable forest management and create opportunities to help retain the local logging industry.
7. Create a long-term revenue resource for future economic growth and community development.

## Economic Development Clusters

- Energy
- Biofuel - Food
- Education
- Office
- Retail
- Tourism

## CURRENT DEVELOPMENTS

*CHP/Pellet Facility:* A keystone of the park will be the development of the Combined Heat and Power plant which will use biomass as its raw material. The Pellet Facility would be one of the largest main users of both the heat and the power that would be generated from the CHP plant. The Pellet Facility would create pellets for the retail market. Currently we are identifying additional funding resources to help with permitting and design.

*WARF Greenhouse Bio-fuel Energy Facility:* This project will integrate the production of algae for bio-diesel along with agriculture and aquaculture. The greenhouses would be able to process and distribute locally grown pro-

duce and fish year around for local consumption by citizens, schools, restaurants, and other sources. The Bio-diesel generated from algae would be used by local industries and be another renewable energy source for not only the Greenhouse, but the entire park. We are currently in the design development, testing the wind funneling concept, and identifying further funding sources for construction.

*Educational Sector:* Because of the innovation of the Silver Bay Eco-Industrial Park, unique opportunities to expand our local educational opportunities exist. We are working with local secondary, post-secondary, and specialized educational organizations to identify specific courses that will help with workforce development training and research and development for the future.

*Other Economic Clusters:* Although our focus is on the top three clusters, the other identified clusters are either existing or are considered ancillary businesses that would be created once the larger clusters become more developed.