



— City of Elgin —

Mayor
Ed Schock

Council Members
Richard Dunne
Robert Gilliam
David Kaptain
John Prigge
John Steffen
Michael Warren

April, 2010

To: Mayor and Members of the City Council
Sean R. Stegall, City Manager

City Manager
Sean R. Stegall

From: Alternative Energy Working Group

Subject: Sustainable City Master Plan Semi-Annual Report

Purpose

The purpose of this memorandum is to provide the Mayor and Members of the City Council with information regarding the Elgin Sustainable City Master Plan, and the progress made by the Alternative Energy working group.

Group Membership

The following individuals are members of the Alternative Energy working group.

Marsha Burks	Gary Masterson	Thomas Lesiewicz
Wendy Covich	Audre Rathburn	Rick D'Ambrosio
David Jurina	Jason Chentorycki	Andy Erbach
Rick Manner		

Goals

The Alternative Energy Working Group's short term goals are:

1. Identify educational entities or other agencies that will assist with performing a feasibility study for implementing alternative energy systems (geothermal field, PV solar, and small vertical wind) for the Elgin municipal building campus. If necessary, research grants for funding the feasibility study.
2. Identify educational entities or other agencies that will assist with performing a feasibility study for implementing alternative energy systems (geothermal field, PV solar, small vertical wind, and other systems) for Elgin area commercial buildings including large box, strip plaza, and central downtown business district buildings. If necessary, research grants for funding the feasibility study. Identify potential business partners or consortiums (e.g., Chamber of Commerce, Downtown Neighborhood Association, etc.)
3. Research projects that have applied solar, small vertical wind, and geothermal systems for residential buildings in our area, and use their results to identify success factors for implementing alternative energy systems.
4. Update 2006 IIT feasibility research on the advantages of utilizing small hydro generating units at Kimball St. dam. Research grants for funding the feasibility study. Identify potential partners (ie. Water reclamation, Friends of Fox)

5. Identify educational entities or other agencies that will assist with performing a feasibility study for utilizing alternative fuel systems (hybrid, bio-diesel, CNG, all electric, etc) for replacing municipal fleet vehicles (trucks, cars, other heavy equipment) when they reach end of life. If necessary, research grants for funding the feasibility study. Identify potential business partners or consortiums (e.g., Automotive technical schools, Fox Valley Association of Electric Vehicles, U-46)
6. Identify educational entities or other agencies that will assist with performing a feasibility study for implementing evolving technologies (fuel cell, Smart Grid) for decentralized power production.
7. Evaluate city codes and policies in support of alternative energy solutions.

The Alternative Energy Working Group's long term goals are:

1. Evaluate feasibility of using geothermal field, PV solar, and small vertical wind systems by the City of Elgin municipal downtown campus buildings and apply for grants and/or alternative funding sources.
2. Evaluate feasibility of using solar and small vertical wind power systems for Elgin area commercial buildings including large box, strip plaza, and central downtown business district and apply for grants and/or alternative funding sources.
3. Evaluate feasibility of using solar, small vertical wind, and geothermal systems for residential buildings and define the characteristics associated with site specific technical and financial feasibility, and apply for grants and/or alternative funding sources.
4. Evaluate feasibility of using low head hydropower generator at Kimball St. dam using the Fox River to generate power that can be sold back to the grid. Evaluate the technical and market impacts of this project on the existing electric utility system.
5. Evaluate feasibility of using alternative fuel systems (hybrid, bio-diesel, CNG, all electric, etc) for replacing municipal fleet vehicles (trucks, cars, other heavy equipment) when they reach end of life.
6. Evaluate feasibility of using evolving technologies such as fuel cell, ie. Bloom box servers, and Smart Grid technologies for decentralized power production.

Relevant Discussion Items

Below is a list of significant items discussed since the previous report.

- Provided city council recommendations on EECBG projects.
- The following guest speakers attended Alternative Energy meetings to address various alternative energy systems:
 - Sam Giliberto, New Edison Energy, on solar and vertical axis wind
 - Chuck Emmert, on Hydropower
 - Dirk Dipold, on Geothermal
 - Mark Matousek, Schneider Engineering, on Hydropower
- Prepared community outreach marketing material for use at the spring conferences.

Group Focus for the Upcoming Quarter

List ideas, research, concepts, etc., that your group intends to work on during the next quarter:

- Evaluate feasibility of using alternative fuel systems (hybrid, bio-diesel, CNG, all electric, etc) for replacing municipal fleet vehicles (trucks, cars, other heavy equipment) when they reach of end of life.
- Identify low hanging fruit with a focus on our short term goals.
- Participate in Green Expo and Sustainable Governance Conference.
- Seek available funding sources for short term goals, where appropriate.
- Identify and build synergy and collaborative efforts with community partners, local institutions, city staff, business and neighborhood groups.
- Marko Spiegel scheduled to discuss “One Watt House” and green renovations of existing homes for May meeting.
- Participate in Elgin Alive (August).