Office of the City Manager
City Hall • 375 Merrimack Street • Lowell, MA 01852
P: 978.970.4000 • F: 978.970.4007
www.LowellMA.gov

Bernard F. Lynch
City Manager

In CC packets 5/12/09

TO: Mayor Edward "Bud" Caulfield

And

Members of the Lowell City Council

FROM: Bernard F. Lynch, City Manager

DATE: May 8, 2009

RE: **Motion of 4/14/09 by C. Martin: Request the Manager have the proper department/committee investigate the feasibility of wind turbines**

And

Motion of 5/6/08 by C. Elliott: Request the Environmental Subcommittee meet with the Manager and Green Building Commission regarding wind power/alternative energy at the landfill and other sites in the City

I write in response to the above motions. Both motions pertain to the feasibility of generating wind power or other alternative energy sources in the City. I have been in contact with Associate Planner Aaron Clausen who assists the Green Building Commission and Assistant to the City Manager Andy Sheehan who is the project manager for the performance contract.

The City's performance contractor, Ameresco, is evaluating the feasibility of installing wind and other alternative energy sources in the City. Lowell is not considered to be situated in a good wind corridor. However, we will get a better sense of the feasibility of wind once Ameresco completes its investigation. Their initial investigation has centered on the landfill, for both wind and solar. However, they will broaden their reach to other locations where wind may be feasible. They are more optimistic about solar power and early analysis indicates that solar is very viable in multiple locations in the city.

The Green Building Commission has conducted preliminary research into the viability of wind power within the city. To determine the overall viability in Lowell, wind maps[1] showing average wind speeds at various elevations were consulted to gain a big picture view for the City. The maps show that at no place within Lowell do wind speeds average above 13.4mph at a height of 270ft. The Massachusetts Wind Collaborative recommends a minimum average wind speed at this height to be 13.5mph; this

[1] Wind Map resources have been made available by the Massachusetts Technology Collaborative and the Connecticut Clean Energy Fund at http://www.masstech.org/renewableenergy/Community_Wind/wind_maps.htm

Office of the City Manager
City Hall • 375 Merrimack Street • Lowell, MA 01852
P: 978.970.4000 • F: 978.970.4007
www.LowellMA.gov

Bernard F. Lynch
City Manager

would indicate that, generally, wind power does provide great promise as a renewable energy source for Lowell.

The Commission has also conducted surveys of various individuals within the renewable energy sector to determine what options the City may have in advancing wind power as a power resource for residents, businesses, and private institutions within Lowell. A discussion with the project manager for the installation of a wind turbine in Worcester, MA resulted in a nuanced view with information provided by the wind maps discussed earlier. Although the maps give a good overview of wind speeds in a region they do not depict an accurate reading of specific sites, and that specific sites within the city may have wind power potential although average wind speeds do not seem to show viability. The Green Building Commission is working to coordinate with a wind technology professional to present at an upcoming Commission meeting and walk through the steps that can be taken to provide better information for Lowell.

Lastly, the Green Building Commission has contacted the Community Wind Collaborative, an offshoot of the Massachusetts Technology Collaborative, to understand if Lowell qualifies for assistance through their program. CWC essentially provides technical, logistical, and financial assistance to municipalities in Massachusetts that seek to sponsor utility scale wind projects. If Lowell qualifies for assistance the CWC will assist in a three step process to determine if wind power is viable on City-owned land. The steps include conducting a site survey to identify potential project sites, technical and economic feasibility study, and if the city decides to construct and operate the wind facility, CWC will provide financial incentives including grants and a standing offer to purchase Renewable Energy Certificates (RECs) generated by the project.

The development of alternative energy sources is a continually evolving process. I will provide the Council with updates as information becomes available. Please contact me if you have any questions.