



Kathryn Harrison  
Councilmember District 4

CONSENT CALENDAR  
June 27, 2017

To: Honorable Mayor and Members of the City Council  
From: Councilmember Harrison, Councilmember Bartlett, and Councilmember Hahn  
Subject: Referral to Community Environmental Advisory Commission and Energy Commission: Residential Wind Turbines

RECOMMENDATION

Refer to the Community Environmental Advisory Commission and the Energy Commission to study the efficiency, safety, and affordability of Residential Wind Turbines and request the Community Environmental Advisory Commission and the Energy Commission each create their own individual subcommittees that will meet and work together to and return to Council with a report and recommendation on whether Residential Wind Turbines are a viable alternative energy source for Berkeley residents, and a recommendation for a process to educate the public on this new renewable energy source. The Community Environmental Advisory Commission and the Energy Commission will each create their own subcommittees focused on studying this matter. These subcommittees will meet at the same time and work in conjunction with one another.

FINANCIAL IMPLICATIONS

Unknown. Staff time will be involved in doing analysis and preparing reports for the Community Environmental Advisory Commission and Energy Commission discussion.

BACKGROUND

In June 2007 the City of Berkeley became the first city in the nation to install a wind turbine for one of its buildings. As new improvements are being made in Wind Power, small Residential Wind Turbines are being touted as a cost-efficient and eco-friendly alternative means of generating power. Residential Wind Turbines sit on a vertical axis, allowing the turbine to operate and generate torque at very low wind speeds. Newer models of small wind turbines are lightweight, comprised of recyclable, highly resilient metal and can be assembled in less than one hour. When operating through an average wind speeds, these models generate little noise.

The United States Department of Energy states that small wind electric systems can:

- Lower your electricity bills by 50%–90%

- Help you avoid the high costs of having utility power lines extended to a remote location
- Help uninterrupted power supplies ride through extended utility outages.

The Commissions should consider the following questions when study the feasibility and scope of Residential Wind Turbines as an alternative means of energy generation in this report:

- What Renewable Energy Companies are producing Residential Wind Turbines across the globe? What is currently on the market? What prototypes are available?
- Can Residential Wind turbines be an effective source of renewable energy for Berkeley residents?
- Do Berkeley homes have viable wind resources? What is the lowest wind speed these systems operate at and at what speeds do these systems generate the best results?
- What is the ideal location for a Residential Wind Turbine? Where do local zoning guidelines allow for these structures? What local building and safety requirements must be met?
- Will the noise made by these turbines be found objectionable by Berkeley residents?
- Can Residential Wind Turbines fit into a Home-Scale model? Can Residential Wind Turbines produce enough energy for one home?
- Can Residential Wind Turbines fit into our Climate Action Plan? What public safety concerns have been voiced regarding these new systems?
- How can we educate the public and raise public awareness about this new renewable energy source? What are potential funding sources?
- How affordable are residential wind turbine systems that are currently on the market? What installation and maintenance requirements are expected?

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the preparation of this report and recommendation

CONTACT PERSON

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