

Vashon-Maury Island Energy Survey Final Results

Rita Schenck 10 October 2003

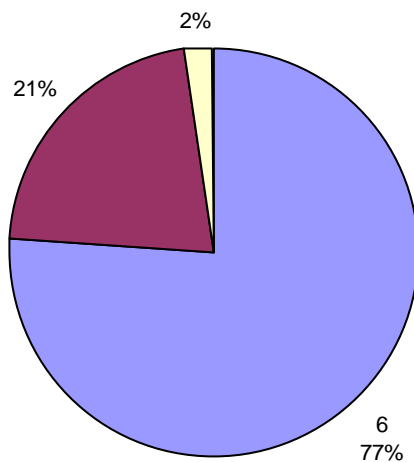
Executive Summary

A survey of Vashon-Maury Island in the summer of 2003 showed that over 75% of the residents favor moving the island to locally-produced renewable energy, and were willing to pay more to achieve this goal. Islanders supported wind, solar and tidal power and preferred a public utility district to accomplish this goal.

Background

IERE (the Institute for Environmental Research and Education) defines energy independence as communities producing all their energy from locally produced renewable energy on a net basis (i.e. the community makes as much energy as it uses, but not necessarily at the same time or of the same kind as it uses). IERE has been pursuing taking Vashon-Maury Island to energy independence for some time, and anecdotal evidence indicated that the community supported this work. However, it was important to assure that the community actually did support this effort, and that the community have an opportunity to provide input as to the options for moving forward.

Should the Island Pursue Energy Independence?



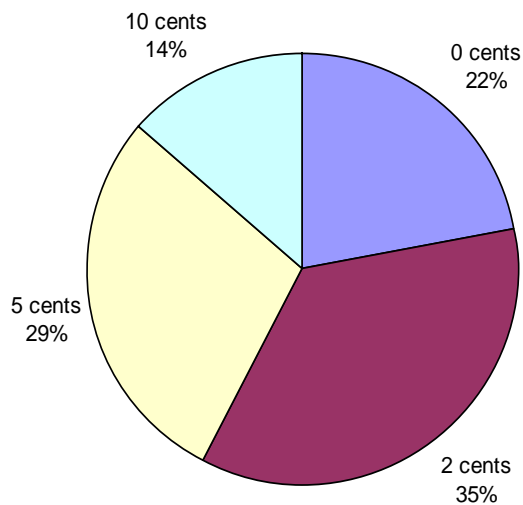
The Survey

With a generous grant from the Bullitt Foundation, IERE researched the legal and financial mechanisms to moving the entire island to renewable energy. On July 22, 2003, an energy information sheet and survey was sent to all households and box holders on Vashon Maury Island. A copy of the material is attached to this report. Within four weeks, over 5% of households responded to the survey. Ultimately, 5.8 percent of households responded (261 responses). The purpose of the survey was to determine whether the Vashon-Maury Island community supported the concept of energy independence, and if so how it should be approached.

Results

The opinion of the island is clear. Over three quarters of the island supported energy independence based on renewable energy produced locally. This is a highly statistically significant result. Islanders also expressed willingness to pay more for renewable energy produced locally. Only 22% of islanders were unwilling to spend more for renewable energy produced locally. A full 14% expressed the willingness to pay 10 cents more per kilowatt-hour. Some of those who did not support energy independence were nevertheless willing to pay more. The standard deviation on these figures is about 3 percentage points.

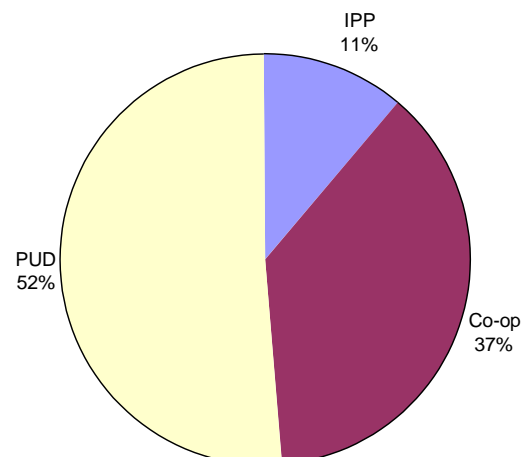
How much more are you willing to pay for local renewable energy (cents per kilowatt hour)



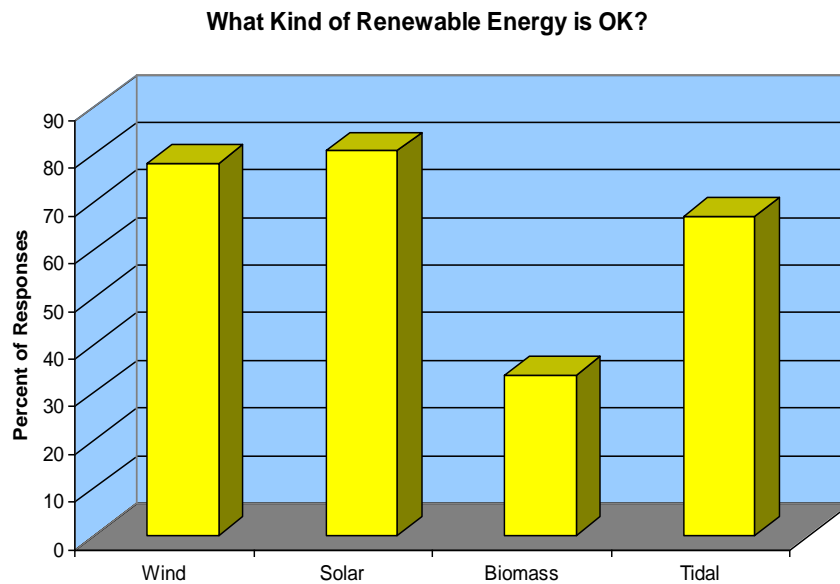
Despite a high apparent willingness to pay, many of the comments of the responses suggested that cost was an important parameter. In particular, the issue of low- and fixed-income families was mentioned by several responders. Nine of those who did not support going to energy independence commented that it was too expensive to do so. Of those supporting energy independence, 14 commented on the need to control costs. Some of those who supported energy independence felt they were unwilling or unable to pay more for electricity. A few provided details of their electric bills, which were in fact quite high, apparently due to living in inefficient, all-electric houses.

Who Should Own Renewable Energy Generation?

Islanders were more divided on their opinion of who should own generation capacity. A Public Utility District was preferred by a majority of 52%. This is a significant margin over the 37% preferring a generation co-op. However, many respondents checked both Co-op and PUD options. Only 11 percent of respondents preferred an IPP (Independent Power Producer). Several commenters suggested that energy generation should be owned by individual homeowners. One responder stated that she already was off the grid and



owned all her own energy generation capacity.



The respondents were quite enthusiastic about all renewable energy options except biomass. In this case, the respondents expressed a great deal of confusion about this kind of renewable energy. It is clear that the community needs more education about the biomass options. 48% of the respondents asked about this kind of renewable energy in their comments.

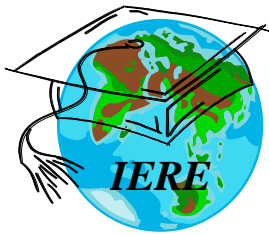
There were also several comments about other alternative energy sources: ground-based heat pumps, household hydroelectric and conservation were all suggested.

Conclusions

The survey confirmed the enthusiasm of the residents of Vashon-Maury Island for renewable energy on island. It also pointed out where people needed more education. The comments were especially useful in pointing out where people were interested or confused. They should drive some of our work into the future.

The comments also showed the high degree of knowledge, interest and caring that characterizes this community. Both those supportive and those opposed to this project made intelligent questions comments and suggestions.

As we promised with our survey, we will continue to work towards an energy independent Vashon Island.



Renewable Energy on Vashon Island

Dear Vashon-Maury Island Resident and Neighbor:

As you may know, the Institute for Environmental Research and Education (IERE) is a Vashon-based nonprofit organization. We support environmental decision making based on factual information. We obtain and help others obtain the knowledge and skills they need to make better environmental decisions. You can get more information about us at www.iere.org.

We believe that to be truly sustainable a community should make as much energy as it uses—and that that energy should be from renewable resources. Having local renewable energy sources would be a big help during emergencies, too. Last year, we did a study that showed we have enough energy to run the island on only locally produced energy.

By running the island, we mean all energy use—cars, ferries, heating and electricity included. Our best potential energy sources are (in order of available energy) solar, wind, biomass and tidal power. Details are at <http://www.iere.org/documents/EnergyIndependentCommunities.pdf>.

We have had lots of support in the community for achieving our Energy Independent Vashon vision. Individual islanders, Sustainable Vashon, the community council and the newspapers and Voice of Vashon all helped support our efforts. But we want to get a more complete view of islander's opinions. We need your advice about if and how we should move forward.

We want to know whether the island at large supports sustainable energy and if that support is strong, we want to know your opinion about how we as a community should pursue generating renewable energy.

One of the major obstacles that renewable energy must overcome before it is accepted in the market is the issue of cost. Renewable energy currently costs more than energy from fossil fuels for three reasons.

1. There are massive subsidies (about \$5 Billion/year) for fossil fuel companies like Exxon and coal mining companies. While there are some subsidies for renewable energy, they are tiny by comparison, and have to be reauthorized every year through the federal budgeting process.
2. The technology for renewable energy generation is not as well developed as fossil fuel technology, although this is changing rapidly. Solar power, for example, uses the same technology as computers. It follows a similar cost curve and is getting cheaper all the time.
3. The price we pay for fossil fuels does not take into account the external costs of its use, such as the health cost of air and water pollution or the ecological damage due to mining and burning the fuels.

The greatest financial advantage that renewable energy has over fossil fuels is its stable cost structure. Unlike fossil fuel, the cost of renewable energy (the sunshine, wind and currents) won't go up over time. Most of the cost of renewable energy is in the capital investment, with operating costs (which vary with inflation) being quite low. And of course, renewable energy is non-polluting, so it has few societal costs. All that means that renewable energy may be more expensive, but its costs are pretty stable, unlike fossil fuel energy.

Who owns electricity generation also has an effect on the costs, because different ownership schemes have different cost structures imbedded in them, as well as different financial, political and regulatory drivers. Choosing the ownership type will have an impact on the island for a long time, so we want your input on this issue. We basically have three options:

1. Renewable energy could be made by independent power producers (IPP's). **IPP's are for-profit businesses**, and are responsive to the owners of the IPP. They are highly regulated by the state. IPP's depend on commercial money to produce power, and so have higher costs of energy than other kinds of power producer. As a result, their rates are typically higher than other kinds of power producers. Decisions about the power produced by an IPP would be made by the IPP, not by island citizens.
2. We could form a producer's co-op. **Co-ops are not-for-profits that serve their members**. Co-ops can borrow money at lower rates. Since they are not-for-profits they cannot get the tax rebate advantages provided by the federal government to IPP's and in some cases to governmental power producers, but generally their energy comes cheaper than that produced by an IPP. A Co-op would provide electrical service exclusively. Co-op members vote for a board of directors democratically, and the board makes the management decisions.
3. We could form a Public Utility District (PUD). **A PUD is a quasi-governmental body that serves the community**. It can issue bonds or tax property to get its funding, so its costs of energy are typically lower than an IPP's. A PUD is responsible to the public and has a board of commissioners who are publicly elected. PUD's can do other things besides provide electricity. They can assist in developing a broad array of community services such as water, wastewater, transportation, telecommunications and energy services.

Your responses to this questionnaire will help us develop a plan moving forward. Thanks so much for your time in filling it in. Then just drop it by, or into the mailbox or fax it to us at 206-279-1570.

Rita Schenck, Executive Director, IERE

Vashon Renewable Energy Questionnaire

- 1) Do you think the island **should** pursue energy independence?
 - Yes
 - No

- 2) Would you be willing to pay more for renewable energy produced locally? (Prices would be higher, but would remain stable).
 - No, 7 cents per kilowatt hour is enough
 - Yes, 2 cents per kilowatt hour more
 - Yes 5 cents per kilowatt hour more
 - Yes, 10 cents per kilowatt hour more

- 3) Renewable energy should be produced by

- An Independent Power Producer (IPP)
- A producer's co-op
- A Public Utility District (PUD)

4) What kinds of renewable energy do you think are OK?

- Wind
- Solar
- Biomass burning (e.g. wood waste or septic waste)
- Tidal

5) Would you like to know more about IERE's Energy Program?

- No
- Yes Name: _____ phone: _____

email: _____

6) Any comments or suggestions would be much appreciated! If you like you can call us at 463-7430, or email us at staff@iere.org.

You can fax this to 206-279-1570, or drop it by at 17917 Vashon Hwy, or fold and tape it closed and mail it. NOT mailing it saves us 97 cents, and so would help us out.