



Schatz Energy Research Center

SERC

Facts about Wind Power and the Bear River Ridge Project

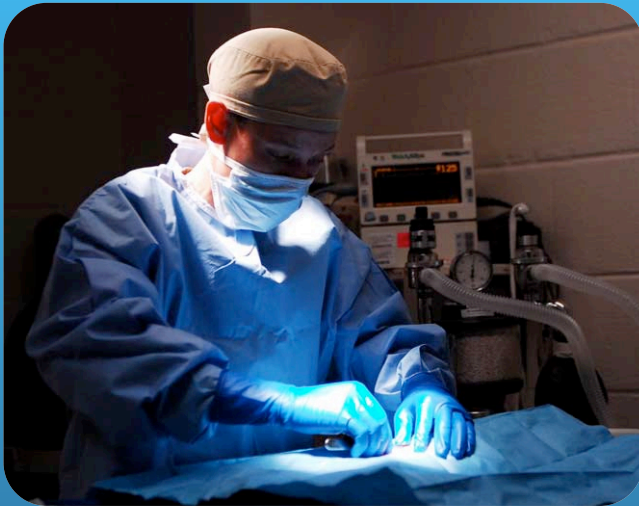
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Schatz Energy Research Center
Humboldt State University

City Council Meeting
Ferndale, California
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Energy is Fundamental to our High Quality of Life



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Wind Power Installations

(capacity in MW)

World	241,000
U.S.	42,000
California	3,600
San Geronio Pass (Palm Springs)	615
Bear River Ridge	50
(1.4% of CA, 0.02% of world)	



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Wind Power in the U.S.

- In 2011, Iowa and South Dakota got more than 20% of their total electricity from wind.
- On October 6 of last year, Colorado got 56% of its electricity from wind.



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Humboldt Electricity Facts

- We have a single 70 MW electric line connecting us to the national grid, less than our average load of 110 MW.
- The Bear River Project will produce enough electricity for 22,000 homes, ~37% of Humboldt County's total.
- All of the electricity would be consumed locally. Humboldt County is not an energy exporter.
- Having 50 MW of local generation will increase our energy security.



Credit: Kellie Brown



Energy Security

U.S. Navy Secretary Ray Mabus:

“We looked at vulnerabilities for the Navy and Marine Corps, and one of the ones that rose right to the top was our dependence on fossil fuels.

Our goal is that by the year 2020, the Navy and Marine Corps will get at least half their fuel from alternative sources.

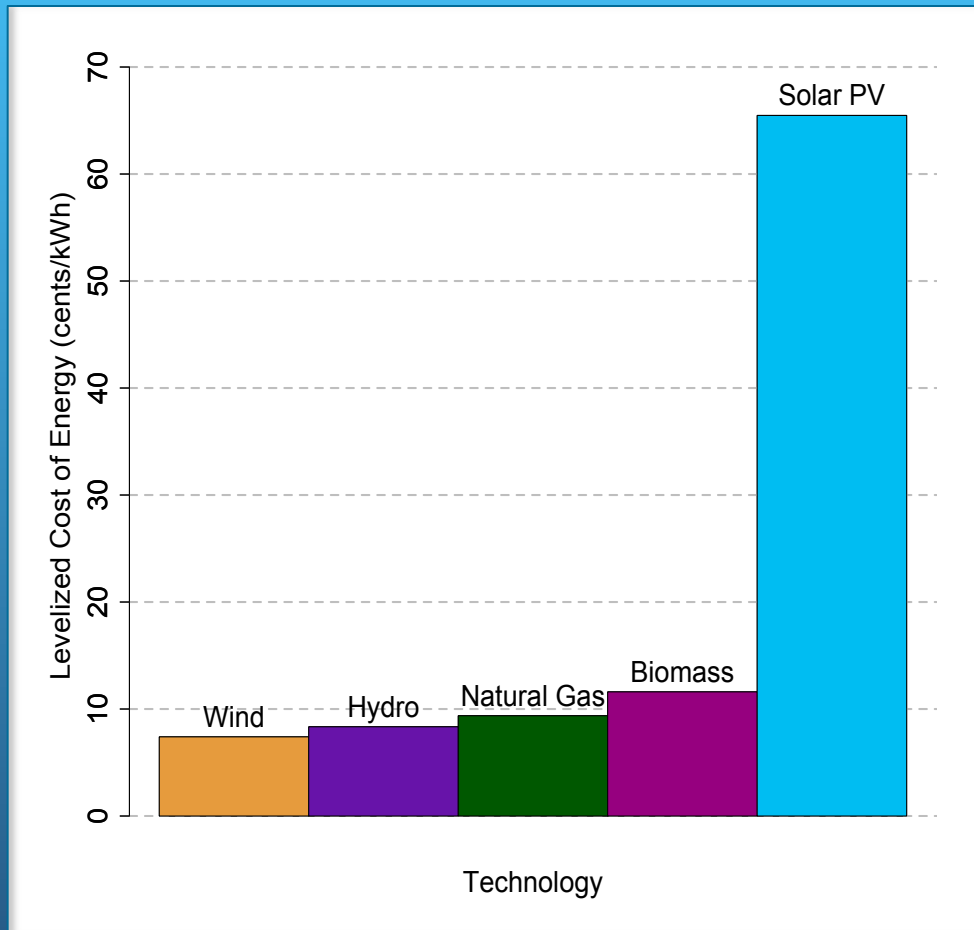
We're doing this to become a better military, to make us better war fighters. We're doing this as a matter of security.”

Local Vehicle Fuel

We drove here tonight in the Toyota Highlander fuel cell vehicle that's pictured. It's being fueled with hydrogen that we produce at the HSU Hydrogen Station from water and local electricity.



Cost of Wind Electricity



- The graph shows the cost of various forms of electricity generation in Humboldt County. This is a standard way to make comparisons of different types of generators. The estimates were recently made by Steve Hackett, economics professor at HSU.
- Because Bear River Ridge is an excellent wind site, wind electricity is the least expensive option for Humboldt County.

Local Economic Impacts



- Revenue
 - \$10 million in taxes
 - \$2 million in lease fees
- Jobs—Construction Phase
 - 35 local jobs
 - \$4.5 million in local economic activity
- Jobs—Operation Phase
 - 10 local jobs
 - \$1.4 million in local economic activity

Local Environmental Benefits



Credit: Kellie Brown

- The project would decrease countywide greenhouse gas emissions by 59,000 tons of carbon dioxide per year.
- This is equivalent to taking 11,600 passenger vehicles off the road (10% of Humboldt County vehicles).



Thank you

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