

Deep-water air conditioning serves many of Hawaii's energy goals

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By Robbie Alm and Bill Mahlum



No one need tell us in Hawaii that imported oil is a precarious commodity upon which to base our individual and collective futures. We feel the shock waves every time the price of that commodity rises and whenever we pull into a gas station, settle our electric bill or pay for everything else that is affected by the price of oil.

But those costs are only the tip of the proverbial iceberg. There are the costs related to our environment, to our quality of life, and to a resource that is finite and quickly being depleted. Consequently,

the search for ways to use renewable energy has taken on a greater sense of urgency.

Equally important is the need to conserve and use energy wisely and efficiently.

That is what Honolulu Seawater Air Conditioning LLC (HSWAC) is positioned to do for downtown Honolulu with one of our most abundantly available resources: seawater. In one of the most densely populated locations in the state, and with some of the heaviest users of air conditioning, the company wants to cool downtown office buildings and facilities using local, renewable and resource-plentiful seawater. The initial district cooling project will provide 25,000 tons of centralized air conditioning for downtown using seawater instead of energy-intensive refrigeration systems.



Robbie Alm, left, is executive vice president of Hawaiian Electric Co., and Bill Mahlum is president and CEO of Honolulu Seawater Air Conditioning.

The seawater air conditioning firm has received wide support and encouragement by local businesses, environmental groups and elected officials. Hawaiian Electric Co. recently signed on as one of HSWAC's first customers. We encourage others to follow.

Among its benefits, per year, the project is expected to reduce:

- » Oahu's dependence on imported oil by conserving more than 178,000 barrels of oil.
- » Electricity by more than 77 million kilowatt hours.
- » Potable water consumption by more than 260 million gallons.
- » Sewage by up to 84 million gallons.
- » Greenhouse gas emissions by avoiding approximately 84,000 tons of carbon dioxide.
- » Use of ozone-depleting substances and chemicals in existing air conditioning systems.

In addition, the project will significantly help individual businesses fulfill state and federal mandates to increase energy efficiency and renewable energy use, reduce potable water consumption and decrease toxic chemicals used in their buildings.

Hawaii is virtually unmatched by any other state in the country in the opportunities to reduce its dependence on fossil fuel through deep-water air conditioning. We believe Honolulu could be one of the greenest downtowns in the U.S., using renewable energy opportunities such as those provided by deep-water air conditioning.

The cost of oil will continue to rise, and there is no one magic bullet to negate its damaging consequences to our economy, energy security and environment. But here in Hawaii we do have a wealth of resources for alternative energy, as well as our own determination to use them wisely.

Using seawater to cool our office buildings offers a golden opportunity to do just that. It is cool, green and clean.

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