

## **Sunmotor's Eric Jensen is Alberta's Solarmeister**

Never one to toot his own horn, Eric Jensen just laughs and shrugs when one of his youthful protégés describes him as the “grandfather” of solar energy in Alberta. In any case, he's too modest and too busy to lay claim to such extravagant titles.



*Eric Jensen assembling a solar pump in the Philippines for a school*

“I guess if you keep working away at something long enough, you become the grandfather,” says Jensen, a broad smile creasing his genial features.

All he knows is his thriving solar-powered business, Sunmotor International Ltd., is humming along nicely in the agricultural hub of Olds, Alberta, about an hour north of Calgary and a kilometre west of Highway 2. Pretty much a one-man operation, Sunmotor earns a modest profit, year in and year out.

When he can find the time, Jensen particularly enjoys helping out on international humanitarian projects. Not long ago, for example, he helped the Canadian Geological Survey to set up a solar-powered reverse osmosis water-treatment system in a tiny farming community in north-east Brazil.

“Keeping kids healthy,” Jensen nods, underscoring his belief that there's no higher priority. “The need is huge. There are two billion people in the developing world drinking bad water.”

Similar projects have gone forward in El Salvador and Jensen continues to explore similar private-sector opportunities in the Philippines and South America.

A crack agricultural engineer by training, Jensen is a life member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA). And the way he tells it, he stumbled into the field of solar energy because of a series of happy accidents.

It began in the early 1980s, when he worked on a Lethbridge pilot project, designed to evaluate the effectiveness of wind as a power source for drainage pumps.

“We were looking for ways to remove water from farmers' fields, without running in electrical power lines,” Jensen recalls. “A lot of these sites were quite remote.” Windmills worked efficiently enough, although they required a lot of maintenance.

An innovative Saskatoon engineering firm suggested Jensen might try experimenting with a solar power source. He gave it a try and the advantages of the new method soon became clear. The solar package was cheaper and more durable, with the added advantage of no moving parts (except the engine/pump).

Things just sort of escalated from there. And Jensen's interest grew exponentially. Before long, he

hit on a way to make a good living from his efforts. It's a low-key, rural operation but it has consistently been able to show a modest profit while developing new solar products based on customer requests. Corporate clients such as EnCana Corp. and Enerplus Resources Fund rely on Jensen's solar-powered pumps to clear up environmentally unfriendly brine spills in faraway places, for example.

## SURPRISED BY SIMPLICITY & EFFICACY

It's possible to trace Jensen's respect for natural power sources back to his childhood. By his own account, he was a country kid who grew up under pioneer conditions, living on a farm lighted by coal-oil lanterns and heated by a wood stove. He also has a weakness for labour-saving devices, which stems from the healthy respect he developed for the energy and muscle strength required to pump enough water to slake the thirst of a family and a small cattle herd.

"Nothing glamorous about that lifestyle, I'll tell you," he says, grinning. "It's true, though. For whatever reason, I've been fascinated by solar power since the first day I saw it work."

His customers are repeatedly surprised by the simplicity and the efficacy of his method. When a client calls for help, Jensen can jump in his truck, tool out to a well site in some remote wilderness, set up his 12- or 24-volt solar panels and connect them to one of his small, sealed submersible pumps, then climb back behind the wheel and drive home.

His mechanism requires no fuel and very little maintenance. The trusty solar-powered pump will keep on chugging until freeze-up, even though the nearest electrical outlet is 45 kilometres away.

"Our system leaches the brine out of the soil into a culvert and our solar pump forces it into a holding tank," Jensen says.

Simple, eh? It's also cheap like borscht and works like a charm. All the customer has to do is ... well, nothing. Over time, the holding tank steadily fills with brine. When the tank reaches capacity, it's time to remove it and re-inject the contents beneath the Earth's surface, in accordance with the directives of government regulators.

"In the old days, companies weren't really pumping out their brine spills. They'd channel it into a culvert and come around once in a while and slurp it out with a vacuum truck," mutters Jensen. "That's really not attacking the problem at its source. Companies are beginning to understand that now."



## TEAMING WITH SERVICE COMPANIES

In recent years, Jensen has worked alongside engineers from the Calgary office of Worsley Parsons Komex, trying to convince major energy players that solar-powered pumps provide an excellent means for removing water from shallow gas deposits.

Looking forward, Sunmotor International is also teaming with service companies, seeking ways to use solar power to run instruments at hundreds of natural gas well sites which are scattered throughout the hinterlands. "When you get down to the physics of it, the power requirements aren't that large," he says.

Jensen also successfully joined forces with Calgary's Oak Environmental Inc., using the sun's rays to power a soil vapour extraction system for EnCana in the Drumheller district.

"It ran happily for six years with only one change of motor brushes. That was a wonderful contract," sighs Jensen, who enjoys portraying himself as a lazy loafer disguised as a businessman.

"All I had to do was go out once a month to write numbers in a book, just to show them it was still performing."

*Tom Keyser is a Calgary-based freelance writer.*