

On a clear day, you can see Kalapana

On any given day, operations at Puna Geothermal Venture (PGV) look pretty quiet. This is often a disappointment to those expecting to see derricks pumping and boilers boiling. State-of-the-art technology has made geothermal energy production a clean, quiet and generally uneventful process. But a lot goes on behind the scenes.

At least twice per 12-hour shift, operators make the rounds of five production wells and 10 turbines. It's a technical job, monitoring all plant activities and making adjustments needed to maintain a continuous flow of power for our island residents and businesses. Electronic data from all areas is fed into a bank of computers where technicians also monitor any unusual signs.

PGV employs about 30 people, contributing \$3 million in annual tax revenues as well as royalties to the state of Hawaii. PGV maintains a workshop on site where welding crews build and repair most of the pipes and precision equipment used at the plant. Much of this work is done by local contractors. Mainland companies are hired as needed for specialized work.

Surrounded by wild cane and papaya fields, in the Puna District south of Hilo, the plant has a small footprint, low emissions, and is relatively noise-free. Once the water and steam from the Earth are spent generating electricity, any excess is returned underground. The closed system never reaches the air, uses no fossil fuels and produces no greenhouse gasses.

If managers anticipate any maintenance or construction work, PGV notifies its neighbors. There's a 24-hour call line for questions. In case of emergencies, such as the 2006 quake off the Big Island, a PGV team arrives within minutes—many of them live nearby.

Ormat Technologies, Inc., a global leader in geothermal production, acquired PGV in 2004 and spent millions upgrading its technologies. Based in Reno, NV, Ormat designs, builds and operates geothermal power production equipment used worldwide. Earlier this year, Ormat was awarded federal funding to search for new geothermal resources using its innovative data-gathering technologies. The three projects are located in California, Nevada and Hawaii. PGV plant manager Michael Kaleikini leads the Hawaii-based team.

The vision began in the 1881 when Hawaii's visionary King David Kalakaua, known for his interest in new things, traveled to New York to meet with Thomas Edison about generating electricity from Earth's heat.

Today Hawaii is one of the most advanced states in harnessing volcanic hot spots to produce electricity—and has a potential for much more. Interest extends beyond Hawaiian shores. A BBC News team visited PGV last year and filmed the operation from a small rise overlooking the plant. In the distance, clouds of steam rose along the coastline south of Kalapana as crimson hot lava from Kilauea exploded into the cool ocean waters.

Puna Geothermal Venture considers this a precious local resource, to be used wisely.

For more information visit: punageothermalventure.com

About the Author

Kayleen Polichetti is an accomplished writer and community outreach specialist with local and international experience. She has lived and worked in Asia, South Asia, [Hawaii alternative energy](#) and [Hawaii geothermal](#), D.C. She has worked to educate legislators and the public on issues relating to energy, health care, community building and development, and tourism.

Source: <http://www.secondarticle.com>