

## COMMENTARY

**COMMENTARY: Lighting Nevada's Casinos...  
With Renewable Energy!***By Shawn Query*[Normal View](#) [Print View](#) [Without Graphics](#) [Mail to a Friend](#)

Reno, Nevada – The “Biggest Little City in the World” is bedazzled with neon and packed with all-you-can-eat buffets and quarter slots. It's a tourist destination for those looking for all the perks of Vegas on a smaller, family-friendly scale. But the greater Reno-Tahoe area may soon be better known as a hub for renewable energy innovation. Nevada's unprecedented, all-encompassing approach to “green” energy issues set an example for other states to unleash their own clean energy potentials.

The first annual Nevada Clean Energy Summit, held August 18 at the Peppermill Hotel and Casino in Reno, showcased the state's leading renewable energy companies. Senate Majority Leader Harry Reid (D-NV) kicked off the day's events with a speech condemning the use of coal-fired power plants and highlighting Nevada's enormous potential for renewables.

“Many of the problems we have are created by the use of fossil fuel,” Reid says. He also said that “clean coal” technology is a misnomer, and resources and technology efforts should be focused on wind, solar, geothermal and biomass. Nevada has the most solar power production per capita in the nation, generating 33 watts per person. Its Solar One thermal solar energy plant is the third-largest project of its kind in the world, supplying 64 megawatts (MW) of electricity to the grid. Nevada is also a leader in geothermal energy, generating 110 watts per person.



Reno was the site of the first annual Nevada Clean Energy Summit.

Ormat, a geothermal company based in Reno, produces 100 MW at its four sites tucked away in the hills around the city, running quietly and almost unnoticed by nearby residents. One MW is enough to power 800 homes, and Reno is the only U.S. city with a population over 100,000 with enough geothermal power within its borders to power the whole city.

The networks of pale yellow tubes and fan systems take up surprisingly little space and do not produce emissions. Paul Thomsen, public policy manager at Ormat, calls that the “sexy factor,” since there's no cloud of smog emitted from its geothermal operations. From Ormat's Steamboat Hills plant is a gorgeous view of the city of Reno, surrounded by the beauty of the Sierra Nevadas. It's hard to believe these small, quiet plants are drawing enough heat from the Earth to satisfy Reno's electricity needs.

In the nearby town of Sparks, Nevada, retired Silicon Valley businessman Rudi Wiedemann is working to help communities produce biodiesel on a large scale. His company Biodiesel Solutions developed the FuelMeister, an in-home system to make 80 gallons of biodiesel a day. The company's new project, the BiodieselMaster, an SUV-sized biodiesel converter, can produce 1,000 gallons of biodiesel per day from unused vegetable oils which will potentially power buses, tractors, cars and trucks in small communities, Wiedemann says.

The BiodieselMaster is fully automated, can run 24 hours a day and, for the tech savvy, sends its user a text message or email when it is running low on oil. The face of in-home biodiesel production has changed from the grungy hippie in the Volkswagen van spewing fried-food exhaust to farmers, businessmen and average Joes. The \$3,000 FuelMeister and the \$350,000 BiodieselMaster make it possible for anyone to turn ordinary vegetable oil into fuel to power their cars and machinery.

As he walked around the Biodiesel Solutions warehouse, Wiedemann's enthusiasm for energy alternatives was readily apparent in his sparkling eyes and expressive gestures. He is very outspoken against U.S. dependence on fossil fuel. “We are wrapped in plastic,” he says. “We are so swimming in fossil fuel that we take it for granted. Fossil fuels are great, but we have other, better solutions.”

It is people like Weidemann, those innovators who realize renewable energy's importance and potential, that drive Nevada's clean energy



economy. Claude Sapp, who also attended the Clean Energy Summit, is another unlikely candidate for biofuel production. With an undergraduate degree in philosophy and art history and a graduate degree in finance, Sapp's work in biodiesel made from algae comes as a bit of a surprise.

**Ormat, a geothermal company based in Reno, produces 100 MW at their four sites tucked away the hills around the city.**

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Not only is Sapp tapping algae, the next biggest thing in biodiesel, but he is also doing so using Nevada's geothermal energy. One renewable energy source fuels the production of another, deeming the whole process very green-friendly.

Algae is 70 to 80 percent oil, and when this oil is extracted, it has the potential to be the cleanest-burning biodiesel source yet. Large-scale algae production in Nevada was previously thought to be impossible due to the cold desert nights, Sapp says, but with the help of geothermal energy, the algae plots can stay as warm as they need to grow. Sapp is working with the Desert Research Institute in Reno to study the emissions from his algae biodiesel and to identify the algae species with the most biodiesel potential. He says aerospace companies and the Department of Defense have expressed interest in the algae biodiesel and he is hoping to expand algae production to accommodate its growing popularity.

The Clean Energy Summit incorporated all sides of the term "clean energy," from municipal electricity sources to biofuels and even electric cars. Alan Gotcher, president and CEO of Altairnano, a Reno technology company, showcased his company's contribution to Phoenix Motorcars newest sport utility vehicles. Unlike previous electric car models, the new vehicles drive from 0 to 60 miles per hour in eight seconds and can drive more than 100 miles on a single charge, Gotcher says. With fast chargers the vehicles are ready to go in 10 minutes (as opposed to the overnight charge times of most electric cars), and crash tests reveal the highest possible safety rating. Gotcher predicts the vehicles will be readily available in commercial market within two years.

With all these incredible renewable energy innovations housed in one place—an ironically over-air conditioned, completely mirrored ballroom of one of the top 10 casinos in the U.S.—Nevada goes above and beyond even the most ambitious green energy legislation. Known for its gaming industry, exuberant resorts and desert landscapes Nevada should also be known as an oasis for green energy supporters. If other states follow suit by tapping their own renewable energy potential and supporting green energy innovations with tax rebates and research dollars, dependence on fossil fuel may finally be a thing of the past.

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