



### **Pioneering pasteurization technology features at BlueTech Forum**

- **Combined energy generation and wastewater treatment reuses heat to cut costs**

A California-based company which is pioneering pasteurization as a third-stage wastewater treatment will be among those attending the BlueTech Forum in June. Pasteurization Technology Group (PTG) has patented a two-for-one process, which heats wastewater to kill pathogens as well as generating lower cost power for municipal or industrial treatment plants.

The company has been chosen as one of eleven innovative clean tech companies, which will be featured in the Innovation Showcase in San Francisco.

Greg Ryan, Chief Executive Officer and co-founder of PTG said: "Taking part in the BlueTech Forum is a great opportunity for PTG to cross-pollinate with others in the industry. It is also particularly welcome to have this event happening in California – where the issues of water shortage, water recycling and water reuse have never been more pressing."

#### **Heat recycling with electricity generation**

The PTG system, which has been successfully used by both industrial and municipal users, combines eco-friendly wastewater disinfection with renewable energy generation. The patented system runs on natural gas or biogas and heats wastewater to 74-80°C, killing microorganisms and pathogens.

The wastewater treatment system is designed to recycle heat, making it extremely energy efficient. Water is treated to a high standard making it available for reuse.

Greg Ryan said: "The system recycles heat over and over."

"The PTG system is a chemical-free, non-toxic way of disinfecting water which is a real alternative to other tertiary treatments such as UV, which uses electrical energy and chlorine, which leaves residual traces in water."



The PTG system was installed in a large-scale pilot project at the City of Ventura in a wastewater plant processing 1.9MI per day. The results suggest a full-sized PTG system could generate enough electricity to power the whole plant – at half the current cost of US\$900,000 per year. Using pasteurization would also save the city US\$250,000 a year on chemical costs.

In 2014 the first full-size PTG system was installed at Graton, California. Another pilot project has taken place in the City of Melbourne, Australia during 2015, where the pasteurization process has been found effective against giardia and cryptosporidium.

At Golden Road, the largest craft brewery in Los Angeles, a PTG B-200 system was installed this year, generating 200kWh of electricity to supply 90 percent of the brewery's needs. Electricity costs will be reduced by 60 percent while boiler costs will be reduced by 80 percent. The savings will add up to more than US\$9m over 20 years, helping the brewery to become energy neutral.

### **Expansion potential**

Greg Ryan said: "Becoming energy neutral is becoming a goal for many industries and utilities around the world which is one of the reasons we believe there is great potential for this technology. Pasteurization treats wastewater to a high standard, which means it can be reused and recycled – for agricultural uses for example.

"In future the company is looking to expand into other markets, to find new industrial partners and attract investors. Pilot projects are also currently taking place into using this technology as part of the drinking water treatment process."

Paul O'Callaghan, founder and CEO of BlueTech Research said: "Wastewater processing is energy intensive so there is a great deal of potential for innovations which target the water energy nexus.

"In the right circumstances PTG can substantially cut energy costs as well as providing an effective low cost alternative to other forms of tertiary stage wastewater treatment. The fact that PTG can off-set electrical energy use and use waste heat from combined heat and power facilitates presents a compelling value proposition.



### **Innovation awards**

Two of the companies featured in the Innovation Showcase will be chosen to receive the BlueTech Disrupt-O-Meter Award and the BlueTech Truffle Award and will be invited to join the Innovation Pavilion at the Water Environment Federation Technical Exhibition & Conference - WEFTEC – in New Orleans in September.

**BlueTech Forum is taking place on 1<sup>st</sup> June in San Francisco.**

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