

Case Study

Cogeneration Wood Pellet Boiler



Qnergy Solution

Qnergy's Power Conversion Kit (PCK80) is a self contained Stirling generator. As an external combustion engine, all it needs is a heat source on one end and cooling water on the other end. The PCK80 transforms a high-end boiler into a state-of-the-art cogeneration unit.

In addition, the generator is maintenance free! Unlike any other generator, it is designed to run without any required engine maintenance for the entire life as a result of the Free Piston Stirling Engine.

Introduction

The concept of generating electric power from wood pellets has been pursued for many years. Wood pellets, a renewable low carbon and inexpensive feedstock, has always been a reliable energy source for boiler manufacturers. **ÖkoFEN**, a leading and innovative Austrian boiler manufacturer, saw a great opportunity in enhancing their product line with Qnergy's maintenance-free heat engine generator.



Results

Qnergy's PCK80 enhances ÖkoFEN's boiler by providing an average of 4500W of electricity on top of its 55kW of thermal energy. The low price of wood pellets and its wide-spread availability, make ÖkoFEN's boiler simple to run with a resulting annual savings of \$4,200.

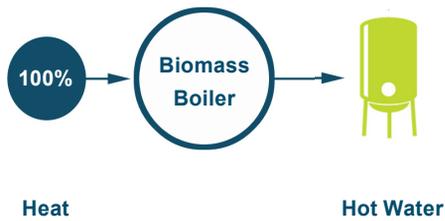
Qnergy provided full support to ÖkoFEN throughout the integration process. Currently, the project is in its last commercialization phase and has multiple pilot sites across Europe.

Application	Wood Pellet Boiler + Electricity
Operating Profile	24/7 Continuous Power
Power Output	4500 watts
Fuel Source	Wood Pellets

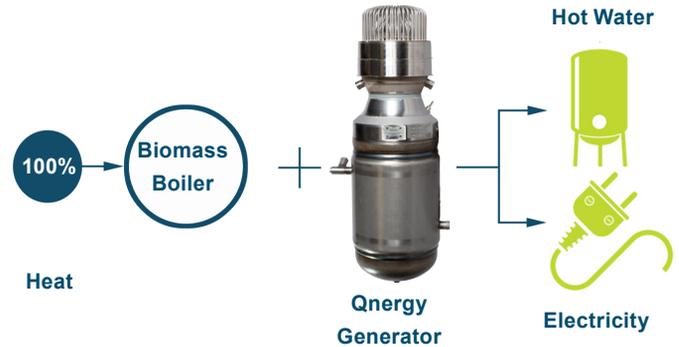


Qnergy and ÖkoFEN at a Glance

Standard Approach:



Qnergy's Approach:



About ÖkoFEN

ÖkoFEN is the European specialist in pellet heating, ecological research and development of small-scale, biomass heating systems was their primary objective and this mission is reflected in their company name, ÖkoFEN.

When wood pellets were launched in the Austrian market in 1996, ÖkoFEN was the first manufacturer to offer the public an officially-certified pellet heating system. This pioneering activity has had wide-ranging effects throughout the industry and represents the beginning of a period of extraordinary market development.

www.oekofen.com

About Qnergy

Qnergy is a company focused on providing energy to a world market looking for innovative, cost effective and efficient ways to energize the future. With more than 40 years of expertise and proven reliability, Qnergy brings proprietary, high-performance Stirling engine technology to the marketplace for commercial, industrial, and residential applications.

Qnergy products include the advanced free piston designed QB series Stirling engine generator that is incorporated into products for space and water heating as well as remote power for oil & gas, telecom, and other off-grid applications.

Qnergy has the ability to bring talent and technology together with its customers, suppliers, and investors to develop unique energy solutions for the 21st century. The company is headquartered in Ogden, Utah.

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