


<p>Company Name and Contact Details:</p>	
<p>POLYTECHNIK Biomass Energy Ltd Christian Jirkowsky, General Manager www.polytechnik.com office@polytechnik.co.nz Telephone: +64 (0)6 877 4603 Mobile: +64 (0)21 477 202</p>	
<p>The world is moving towards clean energy and away from fossil fuels because nations have decided they are no longer willing to accept the costs of pollution, the security risks of importing oil or the threat of global warming. Sustainable energy systems like biomass boilers provide us with clean energy and the utilized fuels are readily available and plentiful.</p> <p>Polytechnik Biomass Energy is one of the world’s leading suppliers of advanced combustion solutions, heat and power plants, and emission control systems and is able to provide its costumers with state-of-the-art technology for the utilisation of biomass for energy generation.</p> <p>Polytechnik engineers, supplies and installs biomass-fired boilers with a thermal output ranging from 300 kW to 30,000 kW (single unit output).</p> <p>Depending on the available fuel, various combustion systems and combinations can be employed. Hot water, superheated water, saturated and superheated steam or thermal oil is used to transfer the energy.</p> <p>For power production steam turbines with a standard electrical output from 200 kW to 20,000 kW per turbine generator are available.</p> <p>As an alternative Organic Rankine Cycles (ORC) using a thermal oil boiler instead of a costly steam boiler are also available, enabling operation at lower temperatures and without a superheater due to the fact that the expansion of the saturated steam of the organic medium leads to dry steam.</p> <p>With more than 40 years of experience in engineering, manufacturing, installing and commissioning of about 2,500 biomass fired heat and power plants Polytechnik has become experts in generating energy from renewable biomass.</p> <p>POLYTECHNIK is proud of its achievements and would welcome the opportunity to share its world leading technology with those who may be considering such a plant.</p>	<p>Core Skill(s) / Product Offered</p>
	<ul style="list-style-type: none"> • Engineering and Design • Biomass Combustion Technologies • Thermal Energy Plants • Energy and Heat Recovery Technologies • Emission Control Systems • Fuel and Ash Handling Systems
	<p>Location in the Supply Chain:</p>
	<ul style="list-style-type: none"> • Turnkey Energy Plants
	<p>Core Product/Activity:</p>
	<ul style="list-style-type: none"> • Biomass fueled Energy Plants • Co-generation Power Systems – Steam • ORC Power Plants • Emission Control and Heat Recovery
	<p>Leading Edge:</p>
	<p>Polytechnik distinguishes itself from other suppliers with high efficiency and availability, fuel flexibility, complete combustion and lowest emissions. Instead of performing expensive and time-consuming test runs, Computational Fluid Dynamics (CFD) modelling are used to calculate flow, temperature, carbon monoxide (CO) concentration, and residence time distributions as well as two-phase flows (flue gas and ash particles) in furnaces and boilers, and to evaluate the impact of design on combustion quality and emissions.</p>
<p>Investment Base:</p>	
<ul style="list-style-type: none"> • NZ, Australia, Europe, Russia, Japan 	
<p>Employees:</p>	
<ul style="list-style-type: none"> • 450 worldwide 	
<p>Production Capacity</p>	
<p>4 workshops in Europe Manufacturing Partners in NZ and Asia</p>	