

About Living Energy Ltd.

Proud to be in our 23rd year !

Living Energy was established in 2003, becoming the **first company in Australasia** wholly dedicated to providing turn-key wood energy solutions to industrial and commercial heat users. From 2003 to 2015 we became the leading specialist supplier of biomass boilers in Australasia, installing 30 boilers from 30kW to 7500kW. These totalled over 40,000kW of installed capacity, at sites as diverse as sawmills, universities, swimming pools, schools and hospitals.

Given an increasingly well-served wood boiler market, Living Energy re-positioned itself to provide wood energy advisory services, an area that suffers from a shortage of experienced practitioners. The hard-won and thorough grounding in designing, supplying, installing, servicing and supporting wood boiler projects, combined with our ongoing involvement in the sector, affords **unrivalled applied experience in the wood energy advisory field**. This enables us to provide guidance to heat users of many sizes and types, from schools and swimming pools, to meat, dairy, and other food processing factories etc. Utilising our hands-on experience in the field, we also specialise in wood fuel handling and storage, a major success factor for wood energy projects.

Our list of clients includes City Councils, State Governments, Government efficiency bodies, forestry companies, dairy factories, sawmills, breweries, schools, universities, power companies, hospitals etc.

We are enthusiastic about sharing our learnings and experiences, and believe that our quality advice in the field of wood energy will result in biomass projects with fully optimised payback. We help our clients to **realise the savings, energy security and de-carbonisation benefits delivered by quality wood energy projects**, whilst guiding them away from the potential pitfalls such as over-sized or ill-matched boilers, poor fuel or sub-optimal fuel stores.

A bit about Rob Mallinson (Managing Director)

With a strong grounding in project management, having worked on the Channel Tunnel (UK) and in the offshore oil industry, in 2000 Rob became a General Manager in Carter Holt Harvey's (CHH) Forest division, which then produced around 2 million tonnes of wood residue annually, some already used in CHH's own biomass boilers. At the time New Zealand was reportedly running short of natural gas, so Rob established a stand-alone CHH business unit to promote and enable the use of woody biomass by commercial and industrial heat users. In 2003 Rob took a leap of faith (having 4 sons under six at that time) and established Living Energy Ltd, with the same mission, followed in 2013 by Wood Energy Australia Pty Ltd.

Living Energy are pioneers in the biomass sector, delivering multiple Australasian firsts, including the 1st school to be heated with a modern wood boiler (in fact the first 6 schools), the 1st hospital, the 1st two swimming pools, the 1st two containerised wood chip boilers, the 1st chip reception trough, the 1st double agitator system, the 1st ceramic filter, the 1st mini-Electrostatic precipitator, the 1st waste water treatment plant drying sludge with biomass, and the 1st hospital in Australia.

Rob is passionate that New Zealand and Australia take maximum advantage of the broad range of benefits that wood energy can provide, and has been on the Board of the Bioenergy Association of New Zealand (BANZ) since its inception in 2001, holding the role of Chair from 2008 to 2015. He has been on Government Advisory panels, and is currently the Convenor of the Wood Energy Interest Group.

To further facilitate this energy transition, Rob imports market-leading wood moisture meters (see [Bioenergy - Professional Moisture Meters - Schaller Messtechnik \(humimeter.com\)](#)) and also specialises in the **design and supply of wood fuel reception & storage solutions**, with the goal of maximising storage volumes, and minimising operational costs. To deliver this Rob brings game-changing equipment to Australasia, such as the **Toploader system** (see [www.Qtoploader.com/](#)) which are now firmly established as Best Practice for biomass projects over 1MW, with 20 such systems installed around New Zealand and Australia in the last few years.

WOOD ENERGY ADVISORY & PROJECT MANAGEMENT SERVICES

With a wealth of relevant hands-on experience, we can quickly identify the critical success factors of a project, allowing the production of punchy and focused assessments in a fraction of the time most would need.

Dip a toe, or take the Plunge !

The various building blocks informing the feasibility and optimisation of a wood energy project can be delivered one step at a time, allowing a staggered approach. This may include some or all of the following:

1. **Boiler Sizing Report** Desk-top study to identify the optimum wood boiler sizing, using energy usage data provided, factoring in the suitability of thermal storage and the optimum peaking/back-up solution. **\$4,950**
2. **Equipment Configuration Report, including maximising fuel storage**
 - a. Desk-top study to configure optimum boiler plant layout including fuel reception, storage and recovery. Based on drawings/site plans, measurements and photos provided. **\$5,950**
 - b. As above but also including a site visit (typically 3 hours) to inform the recommendations, check for interfaces and ensure practicality. **\$6,950 plus travel***
3. **Capital Costing** to provide an indication of the total capital cost (+/-20%) of possible wood boiler solutions including fuel store, boiler house, appropriate flue-gas clean-up, installation & commissioning. **\$1,950**
4. **Summary Wood Boiler Business Case** with projected payback & NPV (assumes steps above are completed) **\$1,490**
5. **Blitzkrieg service** Where a better understanding of biomass-based de-carbonisation options & likely Capex is required quickly, this is the fastest option, involving a half day on-site workshop with key parties, factoring in all the site circumstances and desired outcomes. The options are identified and assessed, resulting in same-day conclusions & recommendations regarding the optimum solution. Includes pre-visit preparations and 1-page Executive Summary report, including simple Payback. **\$6,850 plus travel***
 Past client : "It was a pleasure to meet such an experienced professional, and the 'Blitzkrieg' has advanced our understanding of what's required in this space enormously, exactly as intended". Mike Hodgkinson, CEO, Capricorn Power.
6. **Run wood boiler RFP process** including recommendations re. boiler sizing & equipment/fuel-store layout, assessing site-specific requirements to ensure vital criteria are correctly specified to optimally meet operational reality. Includes identifying potential equipment suppliers and sending RFP to suitable ones. **\$9,950 plus site visit if not yet done***
7. **Review Wood Boiler Supply Proposals** Liaise with suppliers, evaluate to ensure like-for-like comparisons (performance, scope, terms etc), to properly appraise and rank bids, and make recommendations. **\$4,950 for 3 offers, plus \$1,500 for each additional**

Alternatively, we can be engaged to provide Ad Hoc work or a basket of the above services (and/or those listed below) with rates set by mutual agreement.

Other wood energy-related work can be performed as requested, with some examples being :

- a. Design of **wood fuel reception & storage systems** to maximise energy resilience and minimise costs
- b. Assessment of options to **expand existing fuel storage volumes**, and to increase automation
- c. Applications for **Government grants, having successfully managed several applications**
- d. Assessment of **wood fuel availability in the region**, including quality and delivered cost per GJ Useful
- e. **Project Management** of the installation of wood boilers or wood fuel handling equipment
- f. **Carbon Audit** to assess on-site CO₂-equivalent emissions (member of Carbon Energy Professionals)
- g. Quantification of benefits from **using waste heat (e.g. flue gas) to pre-dry wood fuel**

Charge-out rates : Hourly rate \$265+GST, with a minimum of 4 hours per assignment. The use of own vehicle is charged at \$1.50/km. Other expenses are reimbursed at cost plus 15%. ** Three hours of travel are provided at no charge.*

To discuss your project and how we can help, please call **+64 27 2579001** or **rob.m@livingenergy.co.nz**