



April 2010

ECOSMARTHOME

COMPANY INFORMATION

The Energy Mad Story



EcoSmartHome Limited and Energy Mad Limited are 100% wholly owned subsidiaries of Energy Mad Holdings Limited.

To understand how EcoSmartHome came about, an overview of Energy Mad Limited is required!

Energy Mad Limited was founded in 2004 by Kiwi engineers Tom Mackenzie and Chris Mardon. Their ambitious aim was to get five energy saving light bulbs into 50% of the homes in New Zealand to **“save all the electricity used by Christchurch homes!”** By mid 2004 they had selected and branded the “Ecobulb®” from the 100 energy saving bulbs they tested. The result was an ultra high performance, ultra bright, ultra compact, high power factor CFL (Compact Fluorescent Lamp) which has exceeded all industry standards.

Teaming up with Line Trust South Canterbury and Foodstuffs supermarket stores, Energy Mad first implemented the remarkably successful South Canterbury “Ecobulb® Project” in late 2004. In six short weeks, 65% of South Canterbury homes each bought their five Ecobulb® light bulbs for \$10 from Foodstuffs supermarket stores.

Since then, Energy Mad has shaken up the lighting industry in New Zealand by developing high power factor, low mercury, energy efficient compact fluorescent lamps under the Ecobulb® brand. Energy Mad has also completed over 35 Ecobulb® projects throughout New Zealand.

Our partners in these projects have included the utility companies and the NZ Electricity Commission, the largest supermarket chain in New Zealand (Foodstuffs) and Shell New Zealand. Ecobulb® light bulbs are now in almost 60% of all NZ homes.

Having developed a product and ongoing system to address inefficient lighting, Energy Mad started focusing on space heating and general household power use. In 2007 a pilot heat pump project was completed in South Canterbury and in this same year a 1,000 household pilot EcoSmartHome project commenced in North Canterbury.

The Energy Mad Vision

“Making lives better by saving enough electricity to power Europe”

Some of Energy Mad’s achievements over this time include:

- 57% of NZ households use Ecobulb® products (Colmar Brunton research, March 2009).
- Ecobulb® is one of the top selling energy saving light bulbs in New Zealand.
- More than NZD\$331 million saved in electricity costs or the equivalent of a city of 350,000 people powered for one year.
- Successful set up of Joint Venture in China to manufacture bulbs according to Energy Mad’s own high quality specifications.
- Ecobulb® distributors operating in Australia, US (branded as **Ecospiral**), Europe and Asia.
- 5000 home energy assessments completed in New Zealand through EcoSmartHome.
- In 2009, EcoSmartHome won a major project in Victoria, Australia and have successfully launched the business there.

Energy Mad Awards

WINNER:	2008 Deloitte Unlimited Fast 50 “Fastest Growing Retail or Consumer Products Business” (Canterbury and the upper South Island)
WINNER:	2008 Bayer Innovations Award for “Design & Engineering”
FINALIST:	2008 Champion Canterbury Awards for “Small Enterprise”
WINNER:	2007 Deloitte Unlimited Fast 50 “Fastest Growing Company in New Zealand” (12 th Fastest Growing Company in Asia/Pacific)
WINNER:	2007 Deloitte Unlimited Fast 50 “Fastest Growing New Entrant”
WINNER:	2007 PricewaterhouseCoopers “New Zealand Hi-Tech Emerging Company”.
WINNER:	2007 PricewaterhouseCoopers Hi-Tech “New Zealand Hi-Tech High Growth”.
WINNER:	2007 Sustainable Business Network 'Making a Difference' Award
WINNER:	2006 Energy Efficiency and Conservation Authority "Special Award for Energy Efficiency"
WINNER:	2006 Engineering Excellence Awards "Sustainability and Clean Technology"
FINALIST:	2006 Canterbury Resource Management Awards "Community Category"
FINALIST:	2006 Sustainable Business "Emerging Award"
FINALIST:	2006 Sustainable Business "Innovation Award"

The EcoSmartHome Story

EcoSmartHome came about from the success of the lighting projects by Energy Mad; with the broad concept originating with previous Energy Minister David Parker, who recognised the need to develop a 'whole home energy efficiency' service and encouraged Energy Mad to pursue this concept in 2006.

The EcoSmartHome project offers New Zealanders the opportunity to make their homes warmer, healthier and more cost efficient, while saving money and reducing carbon emissions.

Energy Mad began a process of extensive market and product research, funded by MainPower in early 2006 to determine the right product mix and service design for an energy efficiency service. This research involved reviewing large numbers of product types and brands to determine those that offered the best price/performance balance, and ensuring all products that were included in the project met both the highest industry standards, and offered customers a reasonable payback on their investment.

Gaining an understanding of our customers:

The research process also taught Energy Mad a great deal about what customers wanted out of this type of service. Specifically, customers demanded:

- Savings on their power bills
- A warmer, more comfortable home
- Improved home health
- Firm, prioritised recommendations, not vague options that still required a high level of decision making
- Independent advice, not 'muddied' by a company trying to sell its own products when they may be inappropriate
- Complete, end-to-end service where the service provider does 'everything'

EcoSmartHome was developed in accordance with these customer directives and launched in North Canterbury, as a pilot, in August of 2007. The pilot was incredibly successful, with an excess of one in three participants purchasing an energy efficiency package.

National rollout of the EcoSmartHome service:

In late 2007, Energy Mad secured EECA EnergyWise funding to allow up-front cash subsidies to be offered to consumers around the country. EcoSmartHome is one of a few providers who has access to this funding, through the "Warm up New Zealand: Heat Smart" initiative.

EcoSmartHome has grown from a team of three at the beginning of 2008 to over 30 team members today. We have Home Energy Assessors in the following regions in New Zealand:

- South Canterbury
- Ashburton
- Christchurch
- North Canterbury
- Nelson / Tasman
- Waipa
- Tauranga

We have recently employed Assessors for the Marlborough and Auckland regions, with these projects due to launch at the end of May 2010.

EcoSmartHome is direct-marketed to customers through lines company or retailer mailing lists. The letter which is co-branded by Energy Mad and the project partner offers homeowners a 'free home energy assessment', to be conducted by a Home Energy Assessor. Currently, about one in four customers that receive this letter take up the offer.

During the initial conversation with the customer, EcoSmartHome Customer Service Officers ask specific questions about the customer's home; including levels of insulation, forms of heating, current energy use and levels of warmth and comfort. This information forms the first step of analysing the customer's energy profile and highlights the needs and concerns of the customer. A home assessment appointment is then made and confirmation of this appointment (including a photo of the assessor for security purposes) is sent to the customer.

The EcoSmartHome home energy assessment:

The assessment itself takes 90-120 minutes and includes analysis of the building, space and water heating, as well as general energy efficiency in the home. The customer is then given a user-friendly report (printed on site) that details:

- Where the customer's electricity bill is currently going (analysis of use)
- An indication of how their electricity bills could be reduced by making efficiency improvements
- A quote for the recommended energy efficiency devices

EcoSmartHome offers the following energy efficiency devices to homeowners:

- Ceiling and underfloor insulation
- Heat pumps
- Pellet fires
- Clean air log burners
- Heat pump water heaters
- Energy efficient lighting
- Draught prevention

Most items are offered at well below retail prices. Through bulk-buying supplier contracts EcoSmartHome has secured very competitive pricing that is then passed on to the customer.

In addition to the price discounts on products, EcoSmartHome is able to offer most customers a cash subsidy of 33% on insulation (up to \$1,300) and a \$500 subsidy on heating products. If the customer is a Community Services Card holder the subsidies are even higher. Once the customer makes the decision to purchase a package (as over a third of current customers do) EcoSmartHome arranges all installation, consenting and customer service requirements to ensure that the homeowner has an easy and positive experience.

EcoSmartHome delivers the following benefits to customers:

- A free comprehensive home energy assessment with detailed recommendations – both in terms of products to purchase as well as simple changes that can be made in the home to save power
- Low effort – EcoSmartHome does all the work for the customer
- Warmer homes and improved health
- Power savings of up to \$1,100 per annum through improved energy efficiency
- Discounted energy efficiency products – savings of up to \$3,500 on a premium package

EcoSmartHome delivers the following benefits to its funding partners:

- A peak load power reduction of approximately 0.7 MW per 1,000 packages sold
- Carbon dioxide reductions of 15,000 tonnes per 1,000 packages sold
- A proactive focus on energy efficiency
- Positive publicity and delivery of tangible value to homeowners

While it is still too early to predict the full impact of this project, consumer savings of \$160,000,000 over ten years appear feasible at this point.

The EcoSmartHome Culture and Philosophy

Energy Mad is a very successful business but money is far from the key motivator. Each team member is driven by a genuine desire to see New Zealand lead the way in energy conservation. Energy Mad's strategy has provided consumers with a way to reduce their energy demands (and therefore save on power bills), without sacrificing their quality of living.

Being a relatively young team, the culture at both Energy Mad and EcoSmartHome is very much one of youthful enthusiasm with a 'never say never' approach to all challenges. The common theme is a fundamental and unwavering passion for energy conservation.

Whilst EcoSmartHome runs under the umbrella of Energy Mad, it is a business and company in its own right. However, many of EcoSmartHome's philosophies are based on the foundations laid by Chris and Tom in Energy Mad's early days.

When establishing Energy Mad, Chris and Tom were keen to create an open, consultative and forward thinking organisation. EcoSmartHome's management has ensured that this philosophy is carried through to EcoSmartHome. Good ideas can come from anyone at any time, and there is no such thing as a stupid question. There is a strong emphasis on learning and the office library is very well utilised. New books are often added to the reading list and while staff are not expected to read each one, most members of the team are constantly hungry for new ideas. This is an organisation which truly expects its staff to fulfil their potential and you can count on being challenged!

The philosophy on work is simple. Results and output are what counts. How people work and the hours that they keep are sometimes irrelevant, as long as their efforts translate into achieving goals and objectives. EcoSmartHome is very goal focused; there is a lot on the agenda but team members always have time for a laugh. The humour is irreverent, and newcomers may be surprised by the politically incorrect banter born of familiarity and a culture that encourages freedom of expression. It's an environment that will appeal to many, but requires self-direction and motivation.

Energy Mad's Founders and Directors

All operations are overseen by Energy Mad's Board of Directors which includes Energy Mad's Managing Director and Technical Director:

Dr Chris Mardon, B.E (Hons), PhD – Managing Director

Dr Chris Mardon was one of New Zealand's up and coming manufacturing leaders prior to co-founding Energy Mad in early 2004. Following his graduate and doctorate degrees in Mechanical Engineering from Canterbury University, Chris was rapidly promoted to progressively more senior manufacturing management roles in tissue, automotive and plastic film manufacturing facilities. His last position before becoming Director of Energy Mad involved responsibility for 130 manufacturing, planning, engineering, distribution and customer services staff for a large plastic film manufacturer.



Chris made his name during the formation of the Greenfield's Hygenex tissue site. His leadership resulted in world class performance being achieved by several of the large production lines. This resulted in Chris being awarded the prestigious New Zealand Institution of Professional Engineers Young Engineer of the Year award in 2002. His outstanding results continued in successive roles which saw large increases in plant productivity, faster delivery times, significant cost savings, and considerable reductions in health, safety and quality issues.

As Managing Director, Chris is responsible for setting the strategic direction of Energy Mad. Some of his successes to date include the negotiation and marketing of the innovative Ecobulb® projects, negotiating and securing new opportunities for EcoSmartHome, and the growth and expansion of the company. As the company has grown, Chris has moved away from direct involvement of running projects, instead focussing more on new opportunities and company growth. He is however, always eager to be kept up to date on current projects and is happy to provide support and advice when required.

A New Zealand marathon champion, Chris is competitive, driven and passionate about anything he is involved with. His intensity and hunger for learning are somewhat moderated by a dry wit and a sincere interest in the people around him.

Tom Mackenzie, B.E (Hons), MSc – Technical Director

Tom has a background in project management, which involved the implementation of energy saving designs in large international buildings. His formal education includes a graduate degree in Mechanical Engineering, and a Masters in Advanced Environmental and Energy Studies from the University of East London.



Tom's project management experience includes the heating, ventilation and energy saving systems for the £1.2 billion Wyeth building in Dublin, and the £600 million Madrid airport.

Tom's key strengths are entrepreneurship and innovation, and as co-founder of Energy Mad, he has been responsible for the technical development and evolution of the Ecobulb® products. In the early days Tom also managed some of the operations that ensured successful delivery of the Ecobulb® projects. These included the manufacturing of the Ecobulb® light bulbs, supermarket distribution, and the operational details behind implementing promotional campaigns. Tom also oversees the financial systems underpinning Energy Mad and is the "behind the scenes guy".

Tom is laid back but very focussed and was also a top flight athlete in his younger years. He has travelled extensively and harbours a real passion for developing countries; hence Energy Mad's vision is not limited to New Zealand's shores.

Fraser Scott, B.Com, LLB – Energy Mad Strategy and Systems Director

Fraser Scott has a commercial and legal background, with Bachelor Degrees in Commerce and Law. For the last eight years he has managed his own consultancy which provides strategic planning, business strategy development and implementation across a range of sectors. These have included business support, manufacturing and tertiary education. Fraser has written articles for clients on various topics that have been printed in newspapers and business magazines. Prior to his consultancy, Fraser had business management and risk management roles, along with legal and financial administration roles.



As EcoSmartHome Director, Fraser is focused on growth and strategy and ensuring the systems and processes can support the growing needs of the team. He was responsible for the roll-out of the EcoSmartHome model through-out New Zealand, with projects underway in Waipa, Tauranga, Nelson, Tasman, North Canterbury, Ashburton and South Canterbury.

Fraser is passionate about his family and has three young children. He's a drummer, amateur filmmaker, world traveler, coffee connoisseur, political junkie and a big fan of stand-up comedy.

The EcoSmartHome Management Team

Matthew Cutler-Welsh – General Manager

Before settling down in Christchurch, Matthew travelled widely, working as an outdoor instructor in Australia, the USA and the most spectacular parts of New Zealand. An enthusiastic environmentalist, Matthew completed a degree in Natural Resources Engineering at the University of Canterbury and was subsequently headhunted to join the Energy Mad team alongside his wife Natalie.



Matthew has been with the EcoSmartHome team since July 2007, and during this time he has helped build, implement and refine many of the processes and systems used by Assessors. Whilst Matthew has overall responsibility of the team, he has two Regional Managers who look after the day to day needs of the Assessors, allowing him to focus on the operations of EcoSmartHome and the development of new regions.

Matthew and Natalie make the most of life in the breath-taking South Island and are kept extremely busy by their two beautiful young children, Ruby and Jonah.

Rachel Montego, BSc (Chemical Engineering) – Technical and Quality Manager

Rachel has been with the company since July 2006, initially as the Business Development Manager at Energy Mad. Rachel project managed and oversaw many of the lighting projects, including the hugely successful Shell project in 2007; where nearly 1,000,000 bulbs were sold in an eight week period.



Rachel joined EcoSmartHome late last year as the Technical and Quality Manager. She is responsible for managing supplier and installer relationships and the auditing and quality aspects of assessments and product installation.

Rachel has a Bachelor of Science in Chemical Engineering. Before moving to New Zealand, she spent several years with DuPont in the United States, progressing to more senior marketing, manufacturing and engineering roles. These included new product development, patent protection and business case development, inventory reduction and raw material re-sourcing.

Rachael King – Training and Development Manager

Initially hailing from the banking industry, Rachael had a challenging training and systems implementation role with Airbus in the United Kingdom, before returning to New Zealand. Rachael is experienced in office management and in the implementation of management and training systems.



Rachael has been with the company since early 2007. She is responsible for developing the training systems and development strategies for the EcoSmartHome team, as well as being responsible for many of the Human Resources processes. Rachael works very closely with the management team to provide on-going coaching and development to team members. She is passionate about the team being successful and achieving to the very best of their ability – whilst having a great time at work!

Rachael's spare time was once filled with competitive sport, however these days she is more likely to spend time hanging out with her husband and trying to find fun and easy ways to keep fit!

Kiri Dawson – Administration Manager

Kiri is responsible for overseeing all administrative aspects and processes of the EcoSmartHome project, as well as managing and supporting the administration team. Kiri is also responsible for much of the day to day management of the projects and ensuring that each regional mail-out runs smoothly and on time and budget – not an easy task!



Kiri has been instrumental in establishing and streamlining many of the administration aspects of EcoSmartHome and leading and developing the Administration Team during a period of rapid growth.

Kiri has a strong HR and administration background and has previously worked with the NZ Police, Canterbury DHB and the Christchurch Casino. She is married with a beautiful baby daughter.