

Stone & Wood case study: Balancing growth and clean energy



Stone & Wood Brewing Company is building on its considerable sustainability achievements by adopting a clean energy strategy that will deliver meaningful outcomes for its investors, customers and the local communities in which it operates.

For Stone & Wood, being strategic about clean energy means developing a long-term pathway that takes into account our unique position in the market together with the interests of our local communities.

James Perrin, Sustainability Manager

Summary

Stone & Wood is a start-up micro-brewery with manufacturing operations in Byron Bay and Murwillumbah. Stone & Wood is adopting a comprehensive clean energy strategy that will support its reputation as a sustainability leader as it continues to grow its business.

As a rapidly growing business Stone & Wood faces the challenge of balancing its investment in growth with the operational and reputational benefits of clean energy initiatives. To balance these important objectives, Stone & Wood will continue to develop and review its strategy.

About Stone & Wood

Stone & Wood was established in Byron Bay in 2008 and grew from a micro-brewery to an award winning regional craft brewer. It now brews around 10 million litres of beer each year from its two sites in Byron Bay and Murwillumbah, with production expected to grow further over the next 3 – 5 years and beyond.

From inception, Stone & Wood has had a strong focus on sustainability and clean energy. In 2017 it received the Premier's Award for Environmental Excellence at the annual NSW Green Globe Awards. Stone & Wood is certified under the B Corp certification for sustainable businesses.

Current energy situation

In 2016, electricity accounted for 55% of emissions and LPG accounted for 73% of energy use (see Figure 1). The vast majority of energy use and emissions relate to the Murwillumbah site. Stone & Wood's total energy costs in 2016 were around \$380,000.

Several measures have already been implemented to improve Stone & Wood's energy performance. These are listed under "Measures to reach the target".

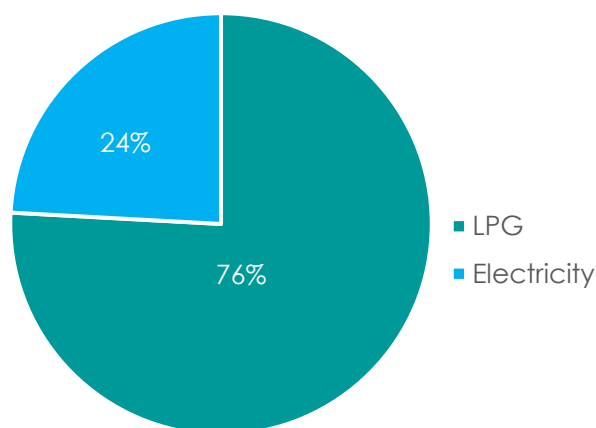






Figure 1: Stone & Wood 2016 energy use types at Murwillumbah site

What is a clean energy strategy?

The NSW Government is actively encouraging businesses to develop clean energy strategies for achieving 100% renewable energy and emissions reduction.

A strategy includes an individually crafted mix of measures for reaching a clean energy target. Measures might include energy reduction, energy efficiency, on-site solar or other renewable energy, off-site procurement of renewable energy or purchase of carbon emission offsets.

Fast facts: Stone & Wood's energy situation and clean energy strategy

	Energy consumption	<ul style="list-style-type: none"> Estimated at 14,600 gigajoules per annum
	Energy cost	<ul style="list-style-type: none"> Estimated at \$380,000 per annum
	Clean energy target	<ul style="list-style-type: none"> 75% electricity from renewables by 2020 Launch a carbon neutral product 175 megajoules of energy per hectolitre of beer brewed
	Possible measures	<ul style="list-style-type: none"> Installation of an anaerobic digester to convert brewery waste into biogas On-site solar power and a community renewable energy project

Setting a target

Stone & Wood recognised the value of adopting a more strategic approach to clean energy. Their strategy development was highly collaborative and built on the existing targets that Stone & Wood had established (see Figure 2).

This strategic approach is crucial, given Stone & Wood expect increases in production into the foreseeable future. This production increase may require

expansion of the Murwillumbah site or expansion elsewhere. Because of this uncertainty, the following targets beyond 2020 are still under consideration:

- Reducing the energy intensity of beer production to 150 megajoules (MJ) per hectolitre
- 100% renewable electricity
- 100% carbon neutral production

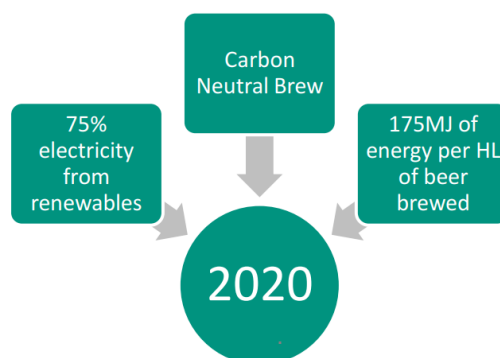


Figure 2: Existing targets

Measures to reach the target

Existing measures

Stone & Wood have already implemented:

- a 100 kilowatt solar PV system at Murwillumbah, generating 139 megawatt-hours per annum to offset about 11% of on-site electricity use
- upgraded workspace lighting to LED
- a “Green Feet” program, a company-wide program that minimises the company’s environmental footprint by focusing on both reduction, reuse and recycling of material and reviewing brewing and packaging processes

Proposed measures

With future expansions planned, the short-term focus is on initiatives that don’t require significant capital expenditure.

Improvements to the efficiency of boilers at the Murwillumbah site are currently underway following a recommendation that was made in a 2016 energy audit.

Next steps include:

- installing additional solar PV capacity
- feasibility of installing an anaerobic digester to convert brewery waste into biogas to power the site’s boilers
- exploring the feasibility of a community energy project.

Stone & Wood key clean energy strategy takeaways

Develop a strategy that accounts for the unique circumstances of a business and the interests of its stakeholders: For Stone & Wood, ‘strategy’ means establishing the kinds of initiatives that are meaningful to stakeholders. This requires ongoing consultation with all stakeholders to balance the interests and needs of investors, customers and the community.

Work with a trusted advisor to maintain the latest information on technical advancements and energy prices: Stone & Wood does not have the dedicated resources required to stay up-to-date with clean energy opportunities. Instead it has established ongoing relationships with specialist advisors to keep up to date with developments.

For more clean energy strategy case studies and a how-to guide for developing a clean energy strategy, visit energy.nsw.gov.au/clean-energy-strategies. While every reasonable effort has been made to ensure that this document is correct at the time of printing, the State of NSW, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance or upon the whole or any part of this document. October 2018 © Crown Copyright State of NSW through NSW Department of Planning and Environment 2018.

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