Moving towards decarbonisation

Client	Date	Location
Greenham	**2014 - Present**	**Victoria/Tasmania, AU**

Greenham is a large-scale family-owned livestock business with three sites across Australia; Smithton (TAS), Tongala (VIC), and Moe (VIC). Rising energy costs and the need for alternative energy sources encouraged them to seek an energy expert to develop an end-to-end energy and carbon management strategy.

How we helped

Since 2014, Northmore Gordon helped Greenham achieve significant energy performance improvements through multiple services, including:

- **Reviewing annual data**
- **Energy productivity audits**
- **Cogeneration support**
- **Carbon credit monetisation and government grants**
- **Energy and carbon reporting**
- **Energy efficiency certificate creation**

The Challenge

Greenham is a large-scale family-owned livestock business with three sites across Australia; Smithton, Tongala, and Moe. Rising energy costs, ageing infrastructure, and the search for alternative energy sources encouraged them to seek an expert to help them with their energy and carbon management strategy.

The process

Smithton

Northmore Gordon was first engaged in 2014 to assist with a switch from coal to renewable biomass in the boiler at the Smithton site. Northmore Gordon registered the project for carbon offsets through the Emissions Reduction Fund (ERF), negotiated sale of offsets to a buyer, and submitted the first offsets report.

Knowledge of measurement and verification methods in the Carbon Farming Initiative enables Northmore Gordon's Energy and Carbon Performance Consultants to create Australian Carbon Credit Units (ACCU) every year, delivering a total of over $175K of value to Greenham. This involves intensive data analysis, modelling, liaising with the Clean Energy Regulator, participating in ACCU Auctions, and negotiating with buyers on the secondary market.

Further to the creation of ACCUs, Greenham was investigating a replacement for their biomass boiler which was nearing the end of its life. Northmore Gordon prepared a detailed specification of the new boiler and identified capable supply and installation contractors. A new state-of-the-art model is now operating at 15-20% greater efficiency, leading to a fuel cost saving of $50K per annum.

Tongala

Following the work at Smithton, Greenham was interested to assess the viability of embedded solar PV at Tongala. Northmore Gordon performed a solar feasibility analysis and investigated the suitability of a 2MW solar farm quoted by an external supplier. With complex electrical and thermal systems it was determined that other options should be investigated before proceeding.

Subsequently Northmore Gordon performed an energy audit to provide a comprehensive review of the facility's energy performance and renewable energy generation options. Although solar was considered , the audit revealed that cogeneration powerfully aligned with the energy profile and needs of the business. Funding through Sustainability Victoria supported the cost of the audit.

There were 15 potential areas of optimisation around the site; which would provide an estimated cost savings of $1M per annum. Greenham wished to further investigate three of these areas; upgrading the hot water system, cogeneration and conversion to High Voltage supply. These stand-alone business cases required further engineering design work and engaging suppliers. Greenham progressed with the cogeneration opportunity, which would also help alleviate hot water complications.

Northmore Gordon also identified that cogeneration could be funded under a government grant, and Victorian Energy Efficiency Certificates (VEECs) could be created based on the energy savings. The grant was secured and the project registered for VEECs, improving the business case. The final design included 2MW of cogeneration units running off natural gas and bio gas captured from the wastewater treatment system. This will provide electricity and hot water to the site, and will augment the existing gas-fired hot water heaters.

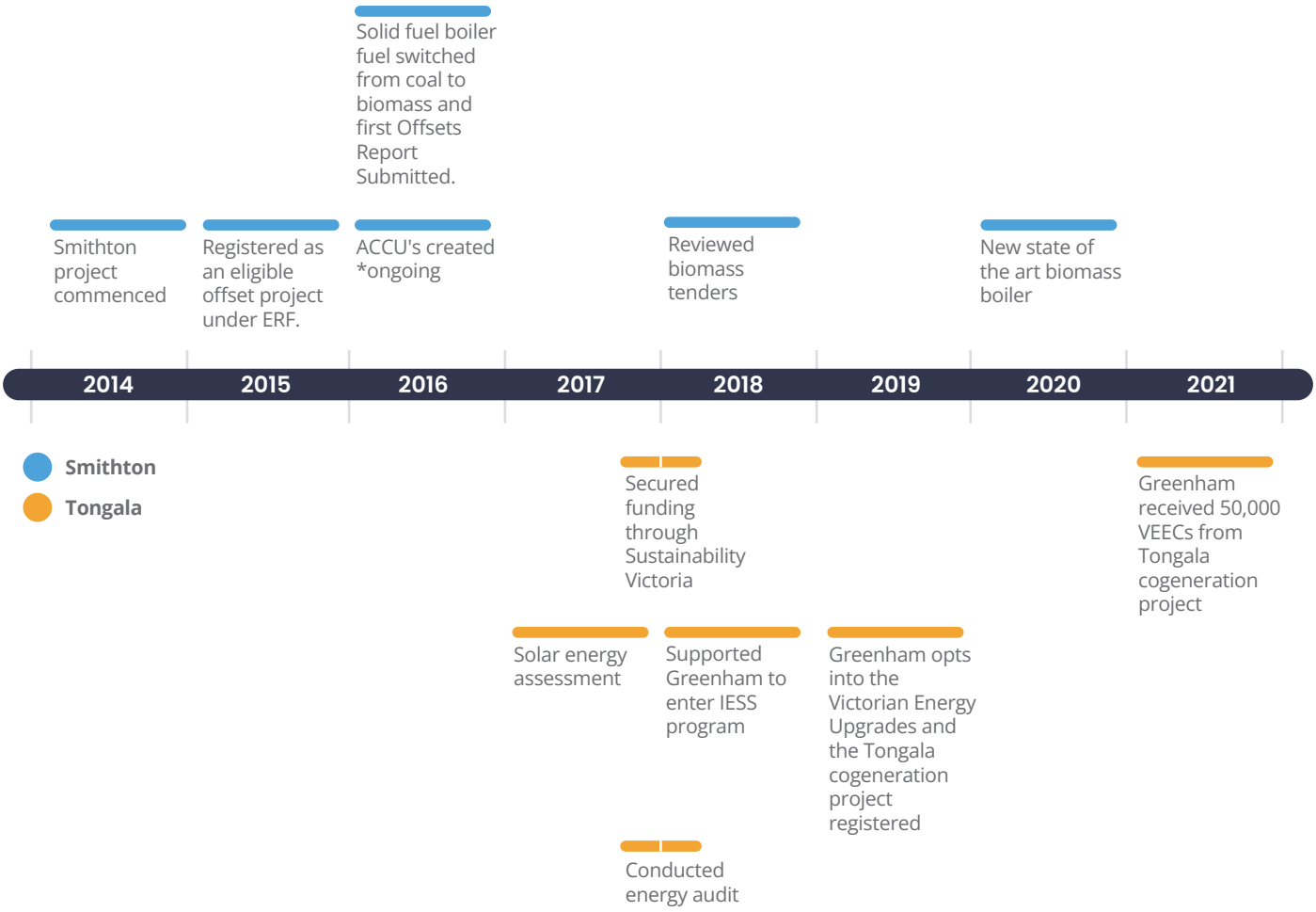
Outcome

Greenham is now positioned as a leader in energy and carbon performance in the livestock processing sector and there are even more opportunities to improve. By entrusting Northmore Gordon to help improve carbon and energy performance, Greenham has drastically reduced energy costs, reduced greenhouse gas emissions, and improved energy productivity at their sites.

Northmore Gordon worked extremely hard to unlock funding to help finance energy productivity and decarbonisation projects. This has been achieved through the annual creation of ACCUs at Smithton with a final value of over $175K. At the Tongala site the cogeneration project NG has been able to generate over $4.5M in total for Greenham from an upfront grant and from the VEU program for project implementation.

With the help of experts, you can help transform your energy performance and dramatically reduce costs. Realise the potential of your energy and carbon performance with our free carbon health check available on our website.

Engagement timeline



Do you need help developing a decarbonisation strategy?

Take our quick health check to determine your Energy and Carbon Performance potential.

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