

## Energise Otaki

Energise Otaki is a collective of individuals, community groups, including Otaki College, and clean technology businesses, focused on the goal of developing the town of Otaki as a net supplier of clean sustainable renewable energy, through a range of local projects. The goals are:

- all Ōtaki households, organisations and businesses take action in some way to conserve and produce energy
- average residential energy use per capita declines year on year.
- local clean energy production increases year on year.
- emissions of greenhouse gas emissions from energy use in Ōtaki declines year on year
- no-one is living in energy poverty in Ōtaki.
- jobs in energy conservation and clean energy generation are created in Otaki.
- Otaki is internationally recognised as a town where research on energy conservation action and local scale clean energy production can be advanced in partnership with the community.
- people have fun on the way to achieving the vision.

Energise Otaki is trying to address the issues of energy use impacts, energy conservation, clean energy technology innovation and development, residential and business take up of new systems, education and change, in a way that works with Otaki as a system – an energy system which includes social, economic and cultural components. It is community focused and projects are grown from the bottom-up, with the speed and type of project driven by interest in the community. We believe that this is an important way to achieve real change.

While the focus is firmly on environmental and social outcomes, Energise Otaki is at the stage of building the base through key projects. It means measuring success in terms of uptake of projects, community buy-in to the concepts and the environmental connections, and creating a real sense in Otaki of change around energy and climate issues.

## College Based Projects

It was an early strategic decision of Energise Otaki to focus in on Otaki College because of its importance to the town and the role of education in achieving long term change. It was also seen as a good way to publicise Energise Otaki goals.

### Wood Energy in the Curriculum

<p><i>This has a two aspects:</i></p> <ul style="list-style-type: none"> <li>• <i>exploration of wood gasification system for the College boilers</i></li> <li>• <i>a woodlot planting initiative at the college. This involves the students understanding wood sourced energy in terms of emissions impacts and the history of wood cultivation (e.g. coppicing). The woodlot will contribute to the wood gasification heating system</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Exploration of the technology continues with the focus on finding a system that will be supported in the long term from within NZ. The technology is otherwise proven.</i></li> <li>• <b>Completed.</b> <i>1350 willow and poplar trees planted on the College grounds.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>During 2016 the wood energy project will be combined with the solar, fuels and wind energy initiatives to develop a renewable energy science curriculum, that focuses first on the junior school and then the senior classes. The solar energy and fuels component have been running for two years. This will be developed as part of the Curious Minds funding.</i></li> <li>• <i>The programme will be linked to the horticulture programme and the woodlot will be extended by approx. 1200 trees.</i></li> </ul>
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The College projects with the assistance of WWF funding have been very successful. They have allowed the set-up of what will be a significant part of the College 'centre for sustainability teaching' aspirations and framework and have helped leverage external funding to cement them into the long term curriculum.



The woodlot of poplars and willows planted in October 2015 at the College as an energy source and use for the teaching programme. They have grown fast and in 2016 will be used as a source to plant another woodlot. The Curious Minds project (see below) will run a six months teaching programme on 'Fuels – Renewable and Fossil Fuels and extend this into the curriculum. Work will continue on the associated wood gasification project.

## Curious Minds Initiative

Energise Otaki in conjunction with Blended Fuel Solutions Ltd and the Otaki Clean Technology Centre applied to the government for funding under the Curious Minds initiative to advance a range of projects at the College, building on the projects that were underway already. The unique aspect is the involvement of clean technology businesses with the College junior classes to promote early interest in the sciences.



The hands on approach, giving the students a sense of being at the cutting edge, has already been tested under past Energise Otaki/ Clean Technology Centre initiatives and this builds on that. The focus will be on students understanding the different sources of energy in the context of climate change, the science of different energy sources and storage and where it could go. It will also be on building it into the curriculum for the long term. When completed this will be a major step in the Energise Otaki / College dream around renewable energy and sustainability – which had its early start with the first WWF funding for Project Solar and has been since advanced further under the Award funding.



Two College students mixing emulsion fuels as part of a Clean Technology Centre Expo.