



## Biomass availability in New Zealand

There are significant amounts of woody biomass available throughout New Zealand that can be collected and treated to make solid biofuel. For information on biomass availability in the regions note the following sources:

1. **Bioenergy Knowledge Centre** - The Bioenergy Knowledge Centre holds a number of reports and presentations from webinars or workshops which have identified the amount of feedstock that could be made available for the production of solid, liquid and gaseous biofuels.  
[www.usewoodfuel.org.nz/wood-energy-knowledge-centre](http://www.usewoodfuel.org.nz/wood-energy-knowledge-centre)
2. **New Zealand wood availability forecasts** - The New Zealand wood availability forecasts (WAF) build on the National Exotic Forest Description (NEFD) data, provided by New Zealand plantation forest owners, to predict the potential wood availability at both national and regional levels. The New Zealand Ministry of Primary Industries (MPI) update the forecasts roughly once every 5 years, with the last WAF published in 2014-2015. The next update is scheduled to be completed by the end of June 2021.

The 2016 National Exotic Forest Description (NEFD) report provides a detailed description of New Zealand's production forests. The NEFD represents an estimate of the net stocked area of the planted production exotic forest estate with the primary intention of producing wood or wood fibre. The NEFD areas statements and yield tables form the basis for the Remsoft Woodstock wood flow models. The models are designed to mimic generalised future forest management practices in each of the regions. These generalised practices include rotation ages and replanting rules. The data is based on a survey of large forest owners to obtain an understanding of their harvesting intentions over the next 10-20 years. These harvest intentions are used to provide a solid base for the future predictions. Several different scenarios are modelled to demonstrate different potential future supply forecasts for each region. The forecasts will be made publicly available on the MPI website.

[www.mpi.govt.nz/dmsdocument/14221/direct](http://www.mpi.govt.nz/dmsdocument/14221/direct)

<https://catalogue.data.govt.nz/dataset/wood-availability-forecasts>

[www.mpi.govt.nz/forestry/new-zealand-forests-forest-industry/forestry/new-zealands-forests-statistics/](http://www.mpi.govt.nz/forestry/new-zealand-forests-forest-industry/forestry/new-zealands-forests-statistics/)

3. [Residual biomass fuel projections for New Zealand](#) – An analysis of the biomass that could be derived from a wide range of sources including forest harvesting, agriculture and urban waste. The analysis assumes three levels of possible recovery of forest harvest residues. The results are presented by region.
4. [NZ Biomass Resource Atlas](#)

### **Volume 1: Lignocellulosic Residue**

This report presents a set of data as maps and tables, showing the amounts and locations of forest residues and other lignocellulosic residues over time from 2005 to 2030 (2050 for forest harvest residues). The resources included are derived from: forest harvest residues; municipal wood waste; wood processing residues; agricultural crop residues, and horticultural residues. This report

provides a summary of data, as at June 2008, with some attempts to predict forward based on drivers such as known crops (forest age classes) and population.

[www.usewoodfuel.org.nz/resource/nz-biomass-resource-atlas-vol-1](http://www.usewoodfuel.org.nz/resource/nz-biomass-resource-atlas-vol-1)

### ***Volume 2 - Wastes and Effluents***

This report presents a set of data as maps and tables, showing the amounts and locations of energy that can be derived from municipal, farm and some industrial wastes and effluents as at 2005. The resources included are major sources of biomass wastes derived from; municipal solid waste; municipal biosolids; farm dairy effluent; pig farm effluent; poultry farm waste; dairy factory effluent, and meat processing effluent. These resources represent the major sources of effluents, and is not a comprehensive list of all effluents available. This report provides a summary of data, as it is known at the time of writing, attempts to predict forward based on drivers such as population and stock numbers were not attempted due to large areas of uncertainty.

[www.usewoodfuel.org.nz/resource/nz-biomass-resource-atlas-vol-2](http://www.usewoodfuel.org.nz/resource/nz-biomass-resource-atlas-vol-2)

5. [Benefits of Investing in Kawerau confirmed](#) - An analysis undertaken by the Crown Research Institute SCION to compare investment returns from wood processing based in Kawerau with those from other parts of New Zealand show Kawerau offers significant benefits in comparison to other wood processing centres. These benefits are gained by locational, logistics and resource synergies and are measured by improved financial performance of businesses, better regional/national GDP impacts, employment resourcing opportunities and more effective use of co-located resources such as geothermal energy. Oct 2013.
6. [EECA Study – Wood Fuel Supply to Morrinsville Heat Plant](#) – A case study and a summary of the availability of fuel in the Morrinsville Area - The report gives an initial assessment on the amount of woody biomass required to meet a steam demand of 17 tonnes per hour at 10 bar, year round; the potential biomass supply to Morrinsville (volume by source); and the cost supply curve for biomass supply.
7. [Southern Wood Council note on Wood Fuel Supply in Otago and Canterbury](#) - Bioenergy and biofuel is fuel produced from wood and from harvest residues - which is currently being left behind from log harvesting. The wood/residues are chipped for use in woodchip boilers, or manufactured into pellets to be used in pellet burners for industrial and commercial energy.
8. [Southern Wood Council Reports on Forestry in Otago and Southland](#) - Frequently asked for information relating to the forest and wood products industry in the Otago and Southland region.
9. [Bioenergy Options Project Reports](#) - This project was initiated to consider New Zealand's bioenergy potential and developed a strategy for the future. It was lead by Scion. The reports below set out the availability of wood fuel on a national basis.
  - [Bioenergy Options Transition Report](#) - This report considers the potential for energy supply of woody biomass from existing forests and drivers for change in New Zealand's energy supply, October 2009, (pdf).
  - [Bioenergy Options for New Zealand - Analysis of Large-Scale Bioenergy from Forestry](#) - This report considers the potential nation-wide impacts of growing forests for energy through a preliminary assessment of the environmental, economic and land-use implications, April 2009, (pdf).

- [Bioenergy Options: Research and Development Strategy](#) - This proposes a strategic direction for bioenergy research in New Zealand, February 2009, (pdf).
  - [Bioenergy Options: Pathways Analysis](#) - Exploring the biomass resource-to-user energy options in detail. Includes a life cycle analysis to comparing costs, environmental impacts and energy returns. It concludes with a vision of a large scale bioenergy scenario for New Zealand, August 2008, (pdf).
  - [Bioenergy Options: Situation Analysis: Biomass Resources and Conversion Technologies](#) - The role of this analysis is to identify options for realising the bioenergy potential and to determine the most appropriate areas of research for New Zealand to pursue, November 2007, (pdf).
10. [Otago wood energy project scoping study](#) - A scoping study of the wood energy opportunities for reducing greenhouse gas reductions in the Otago region for a proposed regional project has identified there are approximately 125,085 Ha of planted production forestry in Otago which would provide sufficient volumes of wood fuel to meet demand over the next 45 years.
11. [NZ Biofuels roadmap](#), Scion, 2018 The Road Map includes analysis of the availability of wood potentially available for the production of transport biofuels. It has a particular focus on the potential availability of biomass from new planting on under-utilised land.

If you are still unsure about the availability of wood fuel in your area contact the [Bioenergy Association Executive Officer](#) for further advice.