GREEN Grid

Future Proofing New Zealand's Electricity Supply

EECA energywise™ Solar Calculator

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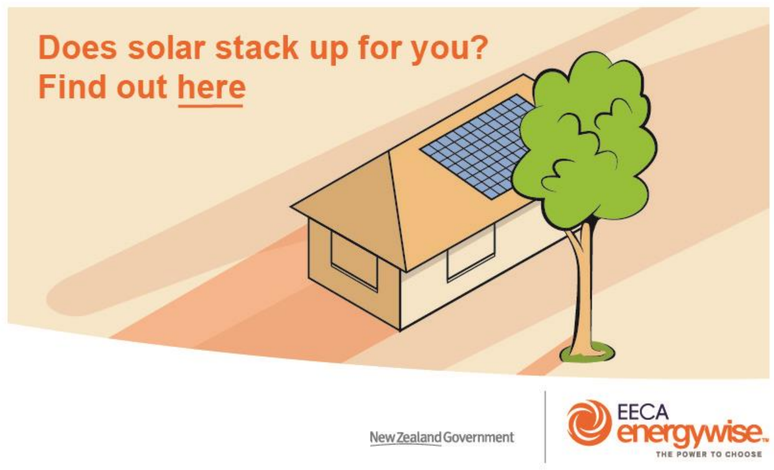
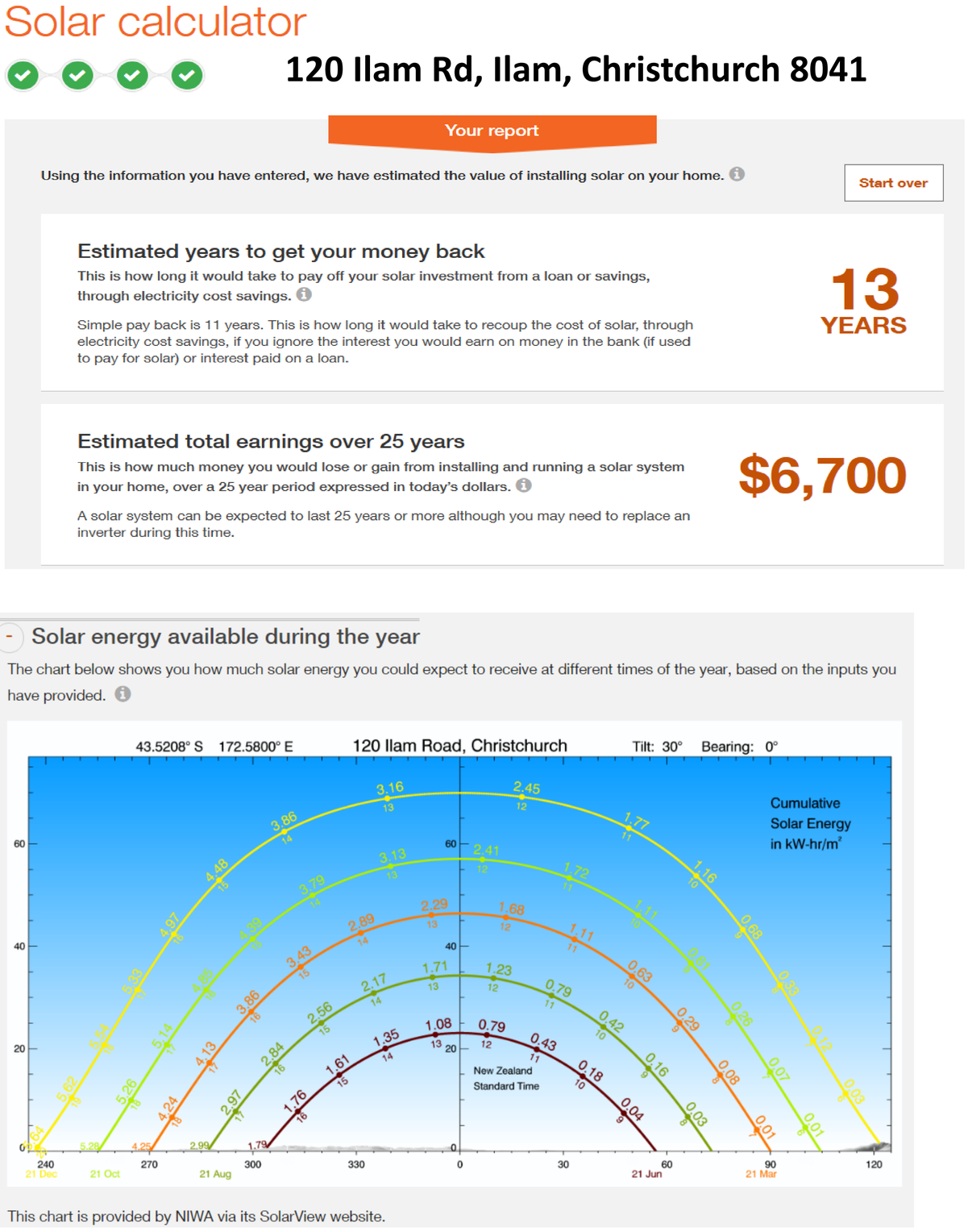
The EECA energywise™ Solar Calculator is a free, easy to use tool to evaluate the benefits of roof-top solar for domestic households. The basis of the calculator was developed by the EPECentre in response to increasing interest in solar electricity systems. The goal of the calculator is to inform and educate the public in an unbiased way so that householders appreciate the financial value of their investment. EECA were an ideal partner to host and manage the development of a professional tool, with a focus on usability balanced with the need for households to tailor the analysis to their specific circumstances.

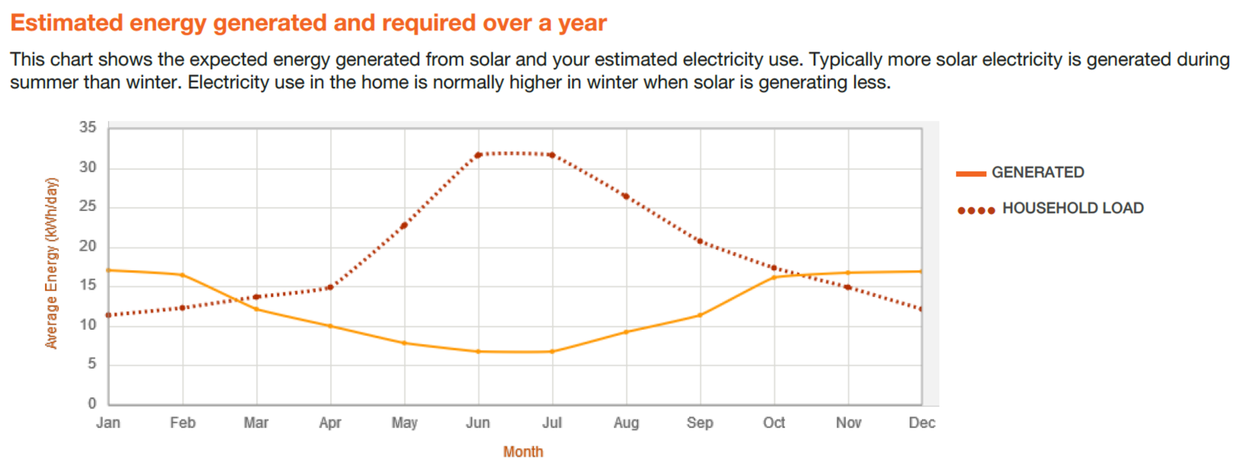




How does it work?

Using information entered by the user, solar and temperature data from the National Institute of Water & Atmospheric Research (NIWA), and data derived from some 18,000 half hourly load profiles from around New Zealand, the calculator determines how much energy is generated in a typical year, and how this is split between self-use and export to the grid. A Net Present Value (NPV) is calculated for the proposed scheme, taking into account how it will be financed, i.e. from savings or loans.

The tool takes an educative approach, providing users with graphs and figures showing the differences in load and generation between summer and winter and typical load and generation profiles over the course of a typical summer or winter day.



EECA Solar Calculator Usage:

The high level of interest in NZ for domestic solar roof-top systems has been reflected by the high usage statistics of the tool. In the first three months since the tool's launch (27 October 2016), there were approximately thirty two thousand unique pageviews. The high completion rates of people evaluating a specific solar scheme also indicate that the usability aspects of the calculator were successfully managed.

Usage Metrics 27 October 2016 to 2 February 2017	
Pageviews:	37 406
Unique Pageviews:	32 332
Average Time Spent on Calculator:	28 mins

This work was supported by the MBIE funded GREEN Grid research and EECA. Further information regarding the details of the model and assumptions, can be found in the paper EECA energywise™ PV Solar Calculator http://www.epecentre.ac.nz/research/papers.shtml.

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