



Solar Water Heating Programme

EECA Finance Assistance Schemes

Grants for Public Buildings Scheme framework

May 2009

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Purpose

This document sets out the principles, rules and requirements, and operational policy and processes for the Solar Water Heating Grants for Public Buildings Scheme.

The aim of the Grants for Public Buildings Scheme is to support public sector organisations in installing solar water heating systems in buildings they own.

Overview

The Grants for Public Buildings Scheme is one of the components of the government programme to increase the uptake of solar water heating in New Zealand.

Under this scheme, EECA has funding available to assist public sector organisations demonstrate government leadership in the adoption of solar water heating technology.

Central government organisations also have an important leadership role to play in implementing Government policies and strategies such as the New Zealand Energy Efficiency and Conservation Strategy (NZECS), New Zealand Energy Strategy (NZES) and others. Local government also has a similar leadership role at a regional and local level. Strategic plans as outlined in documents such as community and district plans include a responsibility to consider wider issues such as sustainability, community development and energy efficiency and conservation.

There are three different grant categories available to assist public sector organisations to show leadership in the adoption of solar water heating. The three grant categories are:

- a. an installation grant
- b. a swimming pool grant
- c. a feasibility study grant

Section 1: Definition of terms

For the purposes of the Grants for Public Building Scheme (the Scheme), this document uses the following terms and meanings:

Solar water heating (SWH) system: means a solar water heating system that uses solar energy as a main source of energy to heat water.

Public building owners: means the legally delegated representatives of government departments, Crown entities, Crown-owned companies, district health boards, territorial or local authorities, regional councils, and government owned educational institutions (e.g. schools and universities).

Feasibility Study Provider: means an appropriately experienced or qualified person to conduct a SWH Feasibility Study, e.g. an engineer, energy specialist/auditor, or similar.

Installer: means the person that installs the components, such as solar panels, controller, etc., of a SWH system: refer section 8.

Section 2: Timeframes

The Scheme is proposed to run until 30 June 2010, subject to:

- A review of the Scheme in September 2009; and
- The availability of government funding.

All installations and feasibility studies funded by the Scheme must be completed by 30 June 2010.

Section 3: Participation

Participation in the Scheme is limited to:

- Public Building Owners as defined in section 1 above; and
- EECA.

Participation is formalised by way of a contract between the Public Building Owner and EECA.

Note: involved with the scheme but have no direct relationship with EECA are:

- Suppliers and Installers of SWH systems; and
- Feasibility Study Providers.

Participation in the Scheme carries all the various responsibilities described in this document.

Section 4: Application criteria

Government organisations may apply for grants in respect of facilities they own but which are operated or occupied by non-government agents, e.g. campgrounds, swimming pools and amenity blocks, child care facilities, leased buildings and businesses on council-leased land.

Application forms for all three grant categories are available from EECA or can be downloaded from the website, www.eeca.govt.nz/funding.

Refer to Appendix One for the application process.

Section 5: Eligibility for Grant

Under the Scheme, grants will only be available to contracted owners of public buildings, and EECA will make grant payments directly to participating public building owners.

The grant will be paid in upon completion of the contract Milestones which include compliance with:

- Applicable Installation requirements and Performance Standards: refer section 8.
- Reporting Requirements.

Section 6: Grant categories and grant values

The Grants for Public Building scheme provides grants in three categories:

a) INSTALLATION GRANT

The purpose of an installation grant is to contribute to reducing the up-front capital costs of installing a solar water heating system.

Residential sized systems (up to 7m² of collector area)

Residential sized solar water heating systems must be:

1. a packaged system (as listed on the EECA website at the time of application); or
2. a system that complies with standards specified in G12/AS2 and has been modelled to standard AS/NZS 4234:2008 for energy performance.

Multiple installations of separate residential sized installations within a project apply in this category; however multiple residential systems that are manifolded together in parallel to service the load and whose collector area is greater than 7m² apply under the commercial sized grant below.

EECA provides payment of up to 25% of the cost of an installed standard residential sized system to a maximum of \$1,000 per standard residential sized system.

Commercial sized systems (above 7m² of collector area)

Commercial sized solar water heating systems must be composed of product complying with the solar water heating product standards specified in G12/AS2 except where unglazed collectors are used in non-potable water applications.

Applications for commercial sized systems require the supplier/designer to submit to EECA the expected energy performance for the installation together with associated calculations and assumptions.

EECA provides payment of up to \$500 per square metre of collector area installed or up to 50% of the installed solar water heating system cost, whichever is less. A maximum grant limit of \$100,000 per system applies.

Note:

1. EECA may require a feasibility study to support an application for a large installation grant wherever there is not sufficient information to make a decision on the merits of an installation application (refer Feasibility Study Grant).
2. Installation grants can only contribute to the costs of the SWH system components which may include framework, tempering valves, pipe work; and should be itemised in the supplier's quote. Therefore, applications should not include costs of project management, engineering, designing, modelling or consent.
3. EECA may require monitoring auditing and/or site inspections and/or Monitoring at the Installation sites, at EECA's expense.

b) SWIMMING POOL GRANT

EECA provides payment of up to 25% of the cost of unglazed solar water heating product for pools owned by government (e.g. schools, councils, etc.).

Confirmation is required that a pool cover/blanket is used to reduce heat loss when the pool is not in use.

Performance modelling of the proposed system may be required (at EECA's expense) where the solar system is not sufficiently similar to other pool systems installed under the programme, or if EECA considers the proposed design requires further review.

Note: in circumstances where an unglazed product is not considered appropriate for a swimming pool, an application may be made for a grant to the value of the Installation Grant (above) and must include justification for selecting a glazed product. Justification requires information provided by a qualified expert to support the request, such as a feasibility study or equivalent other information.

c) FEASIBILITY STUDY GRANT

The purpose of the feasibility study grant is to support public sector organisations in making independent and informed decisions about whether solar water heating is a practical and cost-effective solution.

A feasibility study should result in an impartial review of the proposed site/and installation project and should be undertaken by a qualified expert, e.g. an engineer, energy specialist/auditor or similar. A solar supplier/installer may contribute to the report but is unlikely to be accepted by EECA as the qualified expert to be the lead organisation for a feasibility study.

A feasibility study is required for commercial sized installations when:

1. it is beneficial to provide additional information to support a business case such as for a cost benefit analysis of a large project; and
2. where insufficient information is known about a proposed location, application, context, or system design.

Examples may include a hospital, large swimming pool complex, multiple housing complexes, or a multi-storey building. Check if a Feasibility Study is required with the Grants for Public Buildings Advisor.

Items to be covered in a Feasibility Study should be discussed with the proposed supplier of the service and be provided for in their quote. The study includes such items as listed in the Guide for Undertaking and Presenting the Results of a Solar Water Heating Feasibility Study at Appendix Two or available on www.eeca.govt.nz/funding website.

EECA provides payment to the cost of the feasibility study based on the metres of collector area expected to be installed, or up to 50%, whichever is less, on a per site basis. Payment is on receipt and acceptance of the completed feasibility study.

The maximum amount of grant is as follows:

Collector area	Maximum funding available
7m ² to 20m ²	\$2,000
20m ² to 50m ²	\$4,000
Greater than 50m ²	\$8,000

Section 7: Application evaluation and changes to grant value

Applications can be made at any time - refer to process in Appendix One.

In the evaluation, EECA considers the applicant's contribution to the scheme's objectives: whether the proposed solar water heating installation or feasibility study has the potential to help achieve the Government's objectives of increasing the use of renewable energy, reducing greenhouse gas emissions, improving energy efficiency, because of its:

- a. location
- b. likely energy savings
- c. type of fuel being displaced
- d. ability to be replicated
- e. information and publicity opportunities.

EECA evaluates each application on a case-by-case basis and, at its sole discretion, may agree to increase the amount of grant when:

- For residential sized system Installation grants in a situation where the owner of the building does not benefit from the savings such as tenanted dwellings e.g. council houses or Housing New Zealand homes, **OR** in a school where the installation of a solar water heating system can show demonstrable educational benefits including technology and environmental awareness, EECA may increase the grant for each system from \$1,000 upward to 50% of the cost of the SWH system.
- For commercial sized system Installation grants in the same situation as above, EECA may increase the grant for each system from \$500m² where it is less than 50% up to 50% of the cost of the SWH system. This does not apply for swimming pool installations).

Note: Installation grants can only contribute to the costs of the SWH system components plus framework, tempering valves, pipe work; and should be itemised in the suppliers quote. Therefore, applications should not include costs of project management, engineering, designing, modelling or consent.

- For Feasibility Studies:

In situations where the organisation concerned represents significant potential for SWH applications, EECA may provide funding of more than 50% of the cost of the feasibility study.

Additional information is required from the applicant to support a request for an increase to either the installation or feasibility grant.

A SWH system installation design review may be required (at EECA's expense).

Requests from the same organisation or for the same location for feasibility studies or installations grants will be considered on a case-by-case basis.

Section 8: Installation Requirements

Installations of SWH systems under the Scheme must be undertaken and completed in accordance with the following requirements:

- The New Zealand Building Act and Building Code and other relevant Government and Local Body legislation, regulations and bylaws.
- A Building Consent and/or Code Compliance Certificate information relevant to the specific installation, or written proof that consent is not required.
- All Installation and associated technical work of any product is carried out by qualified personnel who:
 - Have completed product specific training by the supplier of the system; and
 - Have successfully completed the Short Course Certificate in Solar Water Heating Installation or the unit standard 24305 of the National Certificate for Solar Water Heating Installation, or a NZQA approved equivalent course.

Note: for swimming pools, the above training requirement does not apply if the SWH system is not for potable water; installations may be carried out by swimming pool solar water heating trades personnel.
- Comply with any relevant professional Codes of Practice and Codes of Conduct.
- In addition, all installers must exercise and display a degree of skill, knowledge and diligence and a duty of care and service commensurate with their training qualification.
- Systems must comply with:
 - The solar water heating standards specified in G12/AS2 except where unglazed collectors are used in non-potable water applications, such as swimming pool and aquaculture installations.
 - the manufacturers' instructions and specifications.

- The end-user of the completed Installation is provided with:
 - valid and appropriate warranties for all system components
 - documentation containing accurate information and instructions about operation, performance and maintenance of the system
 - reasonable post-installation service.

Section 9: Publicity

EECA will publish information about the Scheme and the recipients of grants (all types) for the benefit of other public sector organisations and the public, primarily on the website www.eeca.govt.nz/funding.

Acknowledgement of EECA's financial contribution is to be made in all installation publicity material.

Section 9: EECA's Role in the Grants Scheme

EECA will undertake the following roles under The Scheme:

- Assessing Scheme applications
- Processing contract documentation
- Monitoring contract deliverables
- Monitoring scheme funding
- Conducting design reviews and ongoing monitoring, if necessary, or audits to ensure compliance with quality and the terms and conditions of financial assistance
- Providing information.

Note: EECA's role does not include involvement in any contractual arrangements between suppliers, installers and government building owners.

Appendix One

Processes for the Grants for Public Building Scheme

Installation and swimming pool grants

1. Read the feasibility study guidelines and/or pools design report available on the website www.eeca.govt.nz/funding.
2. Obtain an itemised quote for a SWH system from suitably qualified persons or parties.
3. Develop a business case and secure balance of funding for the installation.
4. Submit a completed application form (available from EECA or on the website) along with the quote from the individual or organisation engaged to undertake the installation, and with sufficient supporting documentation to assist EECA with decision on grant value such as:
 - a. Schematic/plans, as applicable
 - b. SWH system information – details, design, compliance to standards, building consent issues, etc.
 - c. Reason for request for increased funding level, as applicable
 - d. Additional information, as applicable, to justify a glazed swimming pool SWH system.
5. EECA may undertake a SWH installation design review or SWH system pool modelling.
6. If your application is approved, EECA will offer you a contract committing EECA to paying the grant on completion of milestones. Contract milestones will likely include:
 - a. confirmation of building consent
 - b. confirmation of system design/details
 - c. proof of completion, e.g. photos
 - d. follow up reporting including information suitable for case studies.
7. Instruct the installer to commence the installation.
8. When the installation is completed, send a proof of completion and your invoice to EECA, for payment as per the contract milestones.
9. EECA may require information throughout the contract period to update its website with project information.

Feasibility study grant

1. Read the feasibility study guidelines, available on the website www.eeca.govt.nz/funding.
2. Obtain a quote for a feasibility study from a suitably qualified person with or without input from a supplier/installer.
3. Secure balance of funding.
4. Submit a completed application form (available from EECA or on the website) along with the quote from the individual or organisation engaged to undertake the study.
5. If your application is approved, EECA will offer you a contract setting out the grant payment conditions.
6. Instruct the feasibility study provider to conduct the feasibility study.
7. When completed, send a draft of the completed feasibility study report; EECA may wish to discuss the findings and make recommendations.
8. When the report is finalised, send the final copy and an invoice to EECA for payment.
9. EECA may update the website with feasibility study results.
10. Progress to an application for an installation grant, if applicable.

Appendix two

Outline of the Feasibility Study requirements

The Feasibility Study Report should follow the – “Guide for Undertaking and Presenting the Results of a Solar Water Heating Feasibility Study Report” (available on the website www.eeca.govt.nz/funding).

1. The main outcome of the Feasibility Study Report should provide an understanding of:
 - a) The total volume of water used
 - b) The amount of hot water used
 - c) The temperature of hot water required
 - d) The daily and weekly usage water patterns
 - e) Possible locations of solar collectors and storage tank (if required)
 - f) The present cost of energy used for heating water
 - g) The general design and orientation of the building
 - h) What pipe work would be required to connect a collector to the hot water system
 - i) Would additional hot water storage be required
 - j) Would a pump system be required
 - k) Details of the roof structure and whether strengthening would be required to support SWH collectors and/or tanks
 - l) Whether the existing roof pitch is suitable or is a mounting frame required
 - m) At what orientation to the sun can a collector be mounted
 - n) Any shading from nearby buildings, trees or other objects including hills
2. The Feasibility Study Report should provide sound information to decision makers including:
 - a) Recommendations for or against a SWH installation
 - b) System selection and solutions, e.g. system configuration, size of panel collector area, performance modelling, etc.
 - c) That any SWH systems recommended comply with standards specified in G12/AS2 and other relevant standards; and comply with criteria for Grants for Public Building scheme
 - d) Economic analysis on the financial worth of installing solar system, e.g. the organisation's pay back threshold, capital costs, reduction in greenhouse gas emissions, etc.
 - e) Any Building Code requirements.
 - f) Risks and how to mitigate.