

Renewable Heat Deployment Programme

Application Guide

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IMPORTANT NOTICE

SEAI shall bear no responsibility for the quality, specification or standard of the product or its suitability for the application for which it is installed, nor does SEAI bear any responsibility for the qualification or performance of any consultants used in the design, specification, and installation or commissioning of the system.

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1. Description of Programme

The Renewable Heat (ReHeat) Deployment Programme is aimed at stimulating the installation of new renewable energy plants supplying space, water and process heating in the commercial, industrial, services, public sectors as well as ESCO (Energy Supply Company) installations by means of grant assistance. The Programme is focussed on biomass boilers (fuelled by wood chips and wood pellets), solar thermal collectors and heat pumps.

2. Programme Objectives

The objectives of this programme are to

- Increase the use of renewable energy heating systems in the commercial, industrial, services and public sectors
- Increase the deployment of biomass boilers (fuelled by wood chips and wood pellets), solar thermal systems and heat pumps
- Ensure renewable energy heating systems are designed and installed to operate efficiently
- Achieve carbon emission savings and fossil fuel displacement

3. Who Can Avail of the Programme?

The programme is open to the following applicants

- for plants within the Republic of Ireland
- intending to retrofit or install a new renewable energy heating system in buildings owned or operated by industrial, commercial, services or public sector or community organisations
- Energy Supply Companies (ESCOs)

The application must be submitted by the proprietor of the proposed heating unit, i.e. the person (organisation) that will be the owner of the heating unit, either the manager of the host site or the ESCO.

4. What Supports are Eligible?

Under this programme the following are eligible for support:

- **Feasibility Studies** may be supported on a discretionary basis, (limited to a maximum grant of €5,000 per technology for any project, and a total fund of €300,000 for all projects supported). Feasibility studies in cases of technical complexity or with innovative elements will be preferred for support.
- **Capital Investment Grants** for the purchase and installation of:
 - Automatic biomass boilers designed to consume wood chips and/or wood pellets.

- Solar thermal heating systems contributing to hot water demand for direct use or space heating.
- Heat Pump systems that are ground source, air to water and ground water to water. Cooling only heat pumps are not eligible under the programme, nor are comfort air conditioners or heat recovery heat pumps using waste heat from other processes as a heat source.

5. Product Combinations

It may be possible to apply for a second grant where the combination of technologies makes sense in terms of reduced overall CO₂ intensity, capital costs, value for money and operating service. Applicants should note that the use of combinations requires careful engineering and integration of control systems to ensure that environmental benefits are achieved. Where an applicant wishes to get grant support for such permitted combinations a separate application must be made for each product.

6. What Level of Funding is Available?

The programme will support boiler systems fuelled by wood pellets and/or wood chip fuel, solar thermal heating systems and heat pumps. Support to be provided is as follows:

- Grant support up to 40% or €5,000 per technology (whichever is less) for feasibility studies; the total amount of support being limited to €300,000 for all feasibility studies;
- Capital investment support of 30% for eligible costs, limited by a maximum qualifying cost profile for each technology (see below).

6.1. Biomass Boilers

The range of investment costs for qualifying boilers is limited by maximum qualifying cost profiles outlined in the table below, the cost profiles are inclusive of eligible boiler costs, installation and fuel storage.

Maximum Capacity Costs for Biomass Boilers	
Plant scale ranges kW	Maximum Capacity Cost €/kW
≤20 kW	€1,500 / kW
>20 kW and ≤ 50 kW	€650 / kW
>50 kW and ≤ 250 kW	€500 / kW
>250 kW and ≤ 500 kW	€350 / kW
>500 kW and ≤ 1000 kW	€250 / kW
>1000 kW	See Below (€150 / kW)

It is envisaged that over the life of the programme the cost profile may require alteration to reflect up to date market developments. SEAI funding will be determined based on the lesser of 30% of the submitted costs and 30% of the maximum capacity cost range given above.

For qualifying boilers in the size range greater than 1,000 kW_{th}, maximum capacity cost is fixed at €150/kW_{th}. SEAI funding will be based on 30% for the proportion of cost relating to the first 1000kW and 20% for the proportion of cost relating to the remaining capacity. SEAI funding will be based on the lesser of the submitted costs and the maximum capacity cost based on the size of the boiler. This is determined by the following formula:

- Grant Support = $\{(1000/Y) \times C \times 30\% + [(Y-1000)/Y] \times C \times 20\%$, where
 - Y = boiler size (in kW), and
 - C = lesser of the submitted costs and the maximum capacity cost based on the size of the boiler

For example a 2.5 MW boiler with a total cost of €375,000 (2500 kW x €150/kW) would have a Grant Support = $\{(1000/2500) \times €375,000 \times 30\% + [(2500-1000)/2500] \times €375,000 \times 20\%$ = €90,000.

SEAI should be contacted prior to submitting an application for an installation greater than 1,000 kW.

6.2. Solar Thermal

The range of investment costs for qualifying solar thermal collector systems is limited by maximum qualifying cost profiles outlined in the table below, the cost profiles are inclusive of eligible solar thermal system costs and installation.

Maximum Capacity Costs for Solar Thermal		
System Type	Plant scale ranges m ²	Maximum Capacity Cost €/m ²
Flat Plate	≤ 10 m ²	€1,200 / m ²
	>10 m ² and ≤ 50 m ²	€800 / m ²
	>50 m ² and ≤ 200 m ²	€700 / m ²
	>200 m ² and ≤ 500 m ²	€500 / m ²
	>500 m ²	See Below (€350 / m ²)
Vacuum Tube	≤ 10 m ²	€1,600 / m ²
	>10 m ² and ≤ 50 m ²	€1,100 / m ²
	>50 m ² and ≤ 200 m ²	€900 / m ²
	>200 m ² and ≤ 500 m ²	€600 / m ²
	>500 m ²	See Below (€450 / m ²)

It is envisaged that over the life of the programme the cost profile may require alteration to reflect up to date market developments. SEAI funding will be determined based on the lesser of 30% of the submitted costs and 30% of the maximum capacity cost range given above.

For qualifying solar thermal systems in the size range greater than 500 m², maximum capacity cost is fixed at €350 / m² for flat plate and €450 / m² for vacuum tube, for all larger sizes. SEAI funding will be based on 30% for the proportion of cost relating to the first 500 m² and 20% for the proportion of cost relating to the remaining capacity. SEAI funding will

be based on the lesser of the submitted costs and the maximum capacity cost based on the size of the solar thermal system. This is determined by the following formula:

- Grant Support = $\{(500/Y) \times C \times 30\% + [(Y-500)/Y] \times C \times 20\%$, where
 - Y = solar thermal system size (in m²), and
 - C = lesser of the submitted costs and the maximum capacity cost based on the size of the system

For example a 750 m² vacuum tube solar thermal system with a total cost of €337,500 (750 m² x €450/ m²) would have a Grant Support = $\{(500/750) \times €337,500 \times 30\% + [(750-500)/750] \times €337,500 \times 20\%$ = €90,000.

SEAI must be contacted prior to the submission of an application for solar thermal systems larger than 500 m².

6.3. Heat Pumps

The range of investment costs for qualifying heat pumps is limited by maximum qualifying cost profiles outlined in the table below, the cost profiles are inclusive of eligible heat pump costs and installation.

Maximum Capacity Costs for Heat Pumps	
Plant scale ranges kW	Maximum Capacity Cost €/kW
≤20 kW	€2,200 / kW
>20 kW and ≤ 50 kW	€1,300 / kW
>50 kW and ≤ 250 kW	€800 / kW
>250 kW and ≤ 500 kW	€700 / kW
>500 kW and ≤ 1000 kW	€600 / kW
>1000 kW	See Below (€500 / kW)

It is envisaged that over the life of the programme the cost profile may require alteration to reflect up to date market developments. SEAI funding will be determined based on the lesser of 30% of the submitted costs and 30% of the maximum capacity cost range given above.

For qualifying heat pumps in the size range greater than 1,000 kW_{th}, maximum capacity cost is fixed at €500/kW_{th} for all larger sizes. SEAI funding will be based on 30% for the proportion of cost relating to the first 1000kW and 20% for the proportion of cost relating to the remaining capacity. SEAI funding will be based on the lesser of the submitted costs and the maximum capacity cost based on the size of the heat pump. This is determined by the following formula:

- Grant Support = $\{(1000/Y) \times C \times 30\% + [(Y-1000)/Y] \times C \times 20\%$, where
 - Y = heat pump size (in kW), and
 - C = lesser of the submitted costs and the maximum capacity cost based on the size of the heat pump

For example a 2.5 MW heat pump with a total cost of €1,250,000 (2500 kW x €500/kW) would have a Grant Support = $\{(1000/2500) \times €1,250,000 \times 30\% + [(2500-1000)/2500] \times €1,250,000 \times 20\% \} = €300,000$.

SEAI must be contacted prior to the submission of an application for heat pumps larger than 1,000 kW.

7. Eligible Costs

The following are eligible costs under this programme:

- Feasibility studies - eligible cost are additional external costs incurred by the project applicant in carrying out the feasibility study
- Investment grants - eligible costs are defined as including
 - **Biomass Boiler:** the cost of the boiler, feed mechanism, storage and installation / commissioning
 - **Solar Thermal:** the cost of the solar hot water system and / or solar space heating system, storage and installation / commissioning
 - **Heat Pump:** the cost of the horizontal ground collector/ vertical ground collector / water (well) to water / air source heat pump, storage and installation / commissioning

8. Installers

SEAI recommends that applicants seek confirmation that the selected equipment installers have been certified by the equipment manufacturers to install the systems.

9. Eligibility Criteria

9.1. Feasibility Study Criteria

Applications must indicate that the study and associated report will at a minimum include the following

- The heat requirements of the site
- Technical specification and proposed operating pattern of the heating plant in sufficient detail to support plant specification and ordering
- Reference case/plant against which the proposed heating plant performance is to be compared
- Economics of the plant

- Energy savings resulting from the plant
- Emissions savings resulting from the plant
- Fuel supplies to the plant and robustness of supplies
- A plausible schedule for construction and commissioning of the plant
- Any necessary building construction or alteration
- Requirements to meet regulation and licensing provisions

9.2. Investment Grant Criteria

The following criteria will apply to investment grant applications

- A feasibility / design study or appraisal is required to be carried out prior to a capital investment grant application
- The appropriateness of the system size for the intended service must be confirmed through sign off on the application by the individual/organisation which made the determination
- Installation of the system by an appropriately qualified individual / organisation must be confirmed through sign off of the application
- The client must agree to site visits by SEAI or its designated agent for the purposes of technical or verification inspection
- The client must agree that SEAI may develop a case study for dissemination (protecting as appropriate all confidential or commercially sensitive information / data)
- The application form must be accompanied by a current Tax Clearance Certificate¹ for the applicant organisation

Biomass Boilers

- The boiler must carry the CE mark;
- Boiler efficiency must be at a minimum:
= $73.9 + 7\log(\text{kW})$ for boilers up to 200 kW,
≥ 90% for boilers greater than 200 kW;
- Fuel to be used in the boiler must comply with the technical specification I.S. CEN/TS 14961:2005 or equivalent (excluding post consumer wood waste);
- Boilers must be certified as meeting the standard EN 303-5 where applicable, with the exception of boiler efficiency which must meet the requirements outlined above.²

Solar Thermal

- Where applicable, the system and relevant components must carry the CE mark;
- The solar collector must be certified as meeting the standard EN 12975, or equivalent and/or the solar heating system must be certified as meeting the standard EN12976, EN 12977, or equivalent.²

¹ Organisations which have charity status for the purpose of taxation must send a copy of a letter from the revenue which confirms that they are entitled to a Charitable Tax Exemption. This letter will quote their Charity Number (CHY Number).

² SEAI reserves the right to request a copy of the certificate of compliance.

Heat Pumps

- The system and all relevant components must carry the CE mark;
- The heat pump system must be certified as meeting the standard EN14511, EN255 (pre July 2004 only), or equivalent.³
- The system COP must be tested to the EN14511 standard or equivalent and confirm a minimum COP of:

Type of heat pump	Heat source flow/return temperature	Minimum COP at heat sink flow/return temp. = 35/30 °C
Brine/Water	Brine = 0/-3 °C	4
Air/Water	Air = 2°C	3
Water/Water	Water = 10/7 °C	4.5
Direct evaporation	Ground = 4 °C	4

10. Application and Evaluation Procedure

Application should be made by the intended owner of the heating system on the ReHeat Application Form (available on request or online at www.seai.ie/reheat).

Applicants should send an electronic version of the Application Form containing electronic signatures to reheat@seai.ie.

Alternatively, applicants that do not have electronic signatures should send:

- (i). An electronic version of the completed Applications Form to reheat@seai.ie, and
- (ii). A hard copy containing the original signatures to:
 ReHeat Programme
 Sustainable Energy Authority of Ireland
 Wilton Park House
 Wilton Place
 Dublin 2

Once a completed application form has been received it will be evaluated by SEAI against the above Criteria. The indicative decision time from the receipt of a complete application form is four weeks. If approved, a Grant Agreement will be issued to the applicant. The offer will only be validated upon the applicant indicating acceptance of offer by returning a signed copy of the Grant Agreement to SEAI, which must be received within 30 days of date of issue.

The grant offer remains valid for 12 months from the date of issue of the Grant Agreement unless a later project completion date is agreed with SEAI. The offer will automatically lapse after this date.

³ SEAI reserves the right to request a copy of the certificate of compliance.

11. Payment Procedure

On submission of appropriate documentation, SEAI will transfer grant funds electronically to the applicant's bank account and issue a letter notifying payment to the applicant.

Feasibility Studies

When the report is complete and payment having been made to the contractor by the applicant, the applicant must make a formal request to SEAI for payment comprising the following:

1. Satisfactory feasibility study report;
2. Payment request form, invoices, receipts and a current Tax Clearance Certificate.

Capital Investment Grants

Upon completion and commissioning of the installation, and payment having been made in respect of the supply and installation of the equipment, the applicant must make a formal request to SEAI for payment comprising the following:

1. Completed ReHeat Programme Project Commissioning Report for the appropriate system installed (available on line or on request)
2. Payment request form, invoice, receipts and a current Tax Clearance Certificate

Once all documentation is in order, and a satisfactory inspection completed (where required), the grant will be paid electronically to the applicant's bank account and a letter notifying payment will be sent to the applicant.

12. Installation Inspections

All completed installations may be the subject of verification and / or technical inspections at the discretion of SEAI.

13. Terms and Conditions of the Programme

1. Application Form and Terms and Conditions are those published on the SEAI website on the date of submitting the application.
2. The applicant must ensure that he/she submit the latest version of the Application Form (see www.seai.ie/reheat for the latest version)
3. The applicant must be the intended owner of the heating system, located in the Republic of Ireland, in respect of which the grant application is made.
4. The applicant must install a new product.
5. Approval of grant only becomes valid upon receipt by SEAI from the applicant the signed Grant Agreement to indicate his/her acceptance.
6. Grant approval must be in place before any purchases are confirmed or installation works commenced. No payments will be made retrospectively for costs incurred prior to approval being granted.

7. The grant, once approved, is only payable in respect of the type of product and installer identified in the Application Form and referenced in the Grant agreement.
8. Should the applicants system be selected for inspection, the applicant must provide access to SEAI or its authorised agents.
9. The applicant must obtain all necessary consents and statutory approvals and have authority to install the heating system.
10. The applicant must be prepared to participate in follow-up research (telephone or postal questionnaire) as may be commissioned by SEAI to establish the Programme's impacts and achievements. This will also include the acquisition of information and data for the development of case studies for wider dissemination.
11. SEAI undertakes to use its best endeavours to hold confidential, any information provided by proposer subject to its obligations under law, including the Freedom of Information Act 1997 (as amended). Should proposers wish that any of the information supplied by them should not be disclosed because of its sensitivity, they should, when providing the information, identify the same and specify the reasons for its sensitivity. The Sustainable Energy Authority of Ireland will consult with proposers about such information before making a decision on any Freedom of Information request received.
12. Data Protection – Any personal information which you volunteer to SEAI will be treated with the highest standards of security and confidentiality, strictly in accordance with the Data Protection Acts, 1988 & 2003. SEAI, as data controller, and its agents, will store the information you provide on its database and fully respect the confidentiality of the data provided. The information you provide will be used for evaluation purposes and to facilitate the administration of the grant process. This may require that your data be supplied to and discussed with, in confidence, any person or organisation helping to assess and monitor this application. These persons will be subject to the same requirements for protection of confidentiality. Your signature on this Application Form is treated as confirmation that SEAI and its agents may use the information you have supplied for the aforementioned purposes.

14. Useful Contacts

Programme Administrator

Grants Administrator
Sustainable Energy Authority of Ireland
Wilton Park House
Wilton Place
Dublin 2

Phone 01 808 2035
Fax 01 808 2002
Email reheat@seai.ie

Technical Advice / Support

ReHeat Programme Manager
Sustainable Energy Authority of Ireland
Wilton Park House
Wilton Place
Dublin 2

Phone 01 808 2039
Fax 01 808 2002
Email reheat@seai.ie

This document together with the necessary forms may be downloaded from SEAI's website www.seai.ie/reheat.

IMPORTANT NOTICE

SEAI accepts no liability in respect of any dispute, claim or cause of action arising out of, or in relation to, any product, equipment, work, system or installation in respect of which grant approval was given by SEAI. No undertaking, guarantee, assurance or other warranty, express or implied, is given by SEAI, or any of its agents or servants, in respect of the cost, quality, efficiency and/or benefit of any work, equipment, product, service or installation provided under the Scheme.

The information provided herein and on SEAI's website is provided solely for the purpose of providing assistance to the public, and is not intended to warrant or guarantee the quality of the product and/or the installation chosen by the grant applicant.

The grant payment is subject to any clearances required from the Commission of the European Union any consents, clearances or licenses which might be required from any other competent body. SEAI reserves the right to alter or amend any aspect of this Programme as a consequence of any directions, conditions or requirements of any such consents, clearances or licenses.

ANNEXE 1

The following standards should be complied with as appropriate to the specific installation:

EN 806:2005

Specification for installations inside buildings conveying water for human consumption —

Part 1: General

Part 2: Design

Part 3: Pipe sizing

Part 4: Installation

Part 5: Operation and maintenance

EN 12828:2003

Heating systems in buildings - Design for water-based heating systems

EN 809,

Pumps and pump units for liquids — General safety requirements

EN 1151,

Pumps — Rotodynamic pumps — Circulation pumps having an electrical effect not exceeding 200W for heating installations and domestic hot water installations — Requirements, testing, marking

EN 1489,

Building valves — Pressure safety valves — Tests and requirements

EN 1490,

Building valves — Combined temperature and pressure relief valves — Tests and requirements

EN 1991-1-3,

Eurocode 1: Actions on structures — Part 1-3: General actions - Snow loads

EN 1991-1-4,

Eurocode 1: Actions on structures — Part 1-4: General actions - Wind actions

EN 1993-1-1,

Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings

EN 806:2005

Specification for installations inside buildings conveying water for human consumption —

Part 1: General

Part 2: Design

Part 3: Pipe sizing

Part 4: Installation

Part 5: Operation and maintenance

EN 791:1996

Drill Rigs - Safety

EN 14336:2004

Heating systems in buildings - Installation and commissioning of water based heating systems

EN ISO 14021:1999

Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)

Relevant British Standard

BS 6880 1988

Low temperature hot water heating systems of output greater than 45 kW —

Part 1: Fundamental and design considerations

Part 2: Selection of equipment

Part 3: Installation, commissioning and maintenance