



Quick Reference Guide

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www.macsesave.com

1. What is eSave?

eSave - Financial Products is an internet application designed for banks and financial institutions which enables them to easily handle energy efficiency and renewable energy portfolios and credit lines.

eSave - Financial Products offers a variety of standard green measures, for which eligibility checks can be performed. It is a web based application provided by MACS Energy & Water, an independent Consultancy based in Germany (www.macsonline.de).

The main functions of eSave are to **calculate, monitor and report the environmental impact, e.g. energy savings and CO2 emission reductions** for standardized green measures.

eSave follows the bank procedures and will guide you through the process of loan disbursement automatically and step by step. In the following sections, each step of the loan disbursement process in eSave is briefly described.

2. Get Started – Log in

Log in: Go to login.macsesave.com and use your eSave username and password to access your eSave account. If you have forgotten or lost your password, just send

an email to esavesupport@macsonline.de to request a new one.

Your eSave account is tailored to your user authority. The users have different authorities and the access to eSave functionalities depends on the pre-defined user-roles.

3. Loan Products

When you get a new loan application, you start creating a loan in eSave by clicking on a fitting Loan Product. The Loan Products visible in eSave are pre-defined packages for your financial institution, agreed upon by the management of your Institution. The Loan Products are also source of fund specific which means their name will always contain the source of funds for that specific Loan Product.

Within each Loan Product, there are different measures. A measure is something for which the client would like to have a loan. Hover the mouse over the Loan Product box to see all the measures contained in that loan product.

With eSave, you can check if the proposed measure is eligible for financing from a specific green credit line with just a few clicks.

4. Branch and currency

After selecting the Loan Product, you will be prompted by eSave to select the branch in which the client applied for the loan. The next step is to select the currency in which the loan will be disbursed. In some cases, the currency will be pre-defined.

5. Types of measures and costs

Next, you need to select the measure which your client wants to take a loan for. It is **only possible to select one measure at a time**, but later you can add more measures to a loan.

The measures available in the Loan Product you selected can be Standard Measures, Non-Standard Measures or a combination of both. After selecting the

measure, the next step is to select the time when the measure will be fully implemented and to insert measure costs: Investment cost of measure and, optionally, other costs.

For Investment costs the client needs to have a pro-forma invoice. Enter the **Investment cost of measure** from the supplier's invoice. The cost may include all costs related to the RE/EE measure: e.g, material, equipment, installation works, engineering and design, VAT etc.

There is also a possibility to insert "**Other costs**". This field is optional. Other costs include costs which are not directly related to the implementation of the green measure and for other costs the client does not have to present an invoice. Depending on the conditions of the credit line, other costs may or may not be allowed.

When they are allowed, other costs may not exceed 25% of the loan amount. Also, if there are other costs, they have to be specified. If other costs exceed 25% of the loan amount or these costs are not specified, eSave will not accept the measure.

6. Eligibility checks

If you selected a Non-Standard Measure, the eligibility check must be done by the Environmental Consultant or, for energy projects, the Energy Consultant (this will take a few days). In his Assessment Report, clear information about the measure eligibility or non-eligibility will be provided. Insert the relevant data from the report into eSave and then save the measure.

If you selected a Standard Measure, you need to check its eligibility in eSave. eSave will guide you and ask for information which you need to collect from your client or find in his invoice(s) regarding that specific measure (See Annex 1 for input requirements for each measure).

7. eSave Calculations

After all the measure data is inserted in eSave, it is time to click the calculation-button. eSave will calculate the

environmental impact like energy savings and CO2 emission reductions that the proposed measure will bring. If the measure meets the requirements of that credit line, eSave will let you save the measure. If the measure is not eligible, it will be clearly indicated and it will not be possible to save the measure.

8. Number of measures

Maybe your client wants a loan for financing implementation of several green measures?

A loan in eSave can have one or more measures from the same loan product. After finishing the first measure, eSave will ask you if you would like to create another measure. If you select "Yes", eSave will take you back to the list of measures. If you select "No", eSave will take you to the next step – Creation of loan.

9. Creation of Loans & Client data

First, eSave will automatically generate a **Preliminary loan ID**. You must use this number until the loan application is approved by the Credit Board. If the loan is later approved, the **preliminary loan ID** must be replaced with the real loan contract number used at the Institution.

Additional loan data and client input is required for the loan application and you must fill in this general information:

1. **Requested loan amount**
2. **Client ID:** do not enter your client's real name!
3. **Type of client**
4. **Economic sector:** If you cannot find a matching economic sector, choose the closest one.

Next click on "**Save loan**". If you do not wish to approve the loan directly, your loan will be automatically stored in "**My loans**". If there are any changes to the loan application (e.g. in the loan amount), prior to approval or loan disbursement, it can be easily updated. Just click „**My loans**“ in the main dashboard to access and

edit any of the loan applications and associated measures that you have created.

10. Loan approval

After the loan approval by the Credit Board, the eSave Loan ID must be replaced with the Banks real loan contract number. This is called "**approval**" in eSave.

All your created but not approved loans are called "Pending loans" and are listed in the "**My loans**" section. When you have found and opened your pending loan, you need to input the following data:

1. **Loan ID:** Replace the Preliminary loan ID with real Loan Number. It must be identical to the Institution's internal system Loan ID for the automatic matching of loans.
2. **Disbursement date**
3. **Loan amount:** If not the same as the requested loan amount, fill in the approved loan amount.

Review and check all the loan data. If everything looks good, click on "**Approve the loan**".

Note! Once the loan is approved in eSave too, it can no longer be modified. If you must change something in a loan or a measure of a loan that has already been approved, please contact your superiors or write a mail to: esavesupport@macsonline.de.

11. My loans

All your loans, both pending and approved will be stored in eSave and you can always access them through "**My loans**". You can search for loans by Loan ID or Client ID, but additional search criteria are also possible.

Once you have found the loan you were looking for, you can edit the loan and/or the measure data, approve it if pending and save or print pdf loan summaries.

12. Monitoring & Reports

eSave provides loan summaries in pdf-file format for all loans. Print or download these files to your computer for inclusion in the loan application/ customer folder.

Users who have the Report Manager role in eSave can also generate eSave reports. These reports contain all loans disbursed in a selected period as well as data about the loans and measures, including the environmental impact per year and per lifetime of measures. These reports can be exported as excel files or xml files and can be further tailored to specific needs.

13. eSave Guides

This eSave Quick Reference Guide and other supporting documents, including the eSave Training set, can be downloaded from the eSave "Downloads" available in the "Help" section which also contains a FAQ section. Finally, whenever you have a question or are in doubt about something in relation to eSave, just send an email to: esavesupport@macsonline.de.



Quick Reference Guide
ANNEX 1
Measure input requirements

TABLE OF CONTENT:

1. Replacement of heat supply systems.....	2
2. Building insulation of outside walls and roofs.....	2
3. Replacement of outside windows	2
4. Replacement of outside doors	2
5. Installation of new radiators in combination with installation of thermostatic valves.....	2
6. Replacement of non-regulated pumps for central heating system with new electronically regulated pumps.	2
7. Financing of new residential buildings (for Croatia only).....	3
8. Financing of new non-residential buildings (for Croatia only)	3
9. Replacement of a conventional heating system by a heat pump	3
10. Thermal solar systems for hot sanitary water.....	3
11. Installation of an on-grid photovoltaic system.....	3
12. Replacement of incandescent (conventional) bulbs with CFL (energy efficient) bulbs.....	3
13. Replacement of old fluorescent lamps with modern T5 lamps with electronic ballast	4
14. Replacement of an old single axle tractor	4
15. Replacement of an old double axe tractor	4
16. Agricultural implements	4
17. Heat recovery at dairy farms.....	5
18. Combine Harvester	5
19. Replacement of irrigation systems	5
20. Conversion of cars running on gasoline to CNG (compressed natural gas)	5
21. Refrigeration Appliances EU Label	5
22. Washing Machine EU Label	5
23. Dishwasher EU Label	6
24. Oven EU Label	6
25. Air conditioning EU Label (cooling and heating)	6
26. Energy services and supply businesses	6
*Heat supply input data required for eSave Standard Measures.....	7

Input details required for standard measures

1. Replacement of heat supply systems

- a) Ask the client what his / her current heat supply system* is.
- b) Ask the client what his / her new heat supply system* will be.
- c) Look in the pro forma invoice or the technical description which the client got from the supplier of the new boiler. What is the total heat capacity of the new boiler in KW?

2. Building insulation of outside walls and roofs

- a) Tell the client that the measure must include installation of thermal insulation with common insulation materials (e.g. Styrodur, Styrofoam, mineral wool). Note that the thickness of insulation must be at least 5 cm.
- b) Ask the client what his / her current heat supply system* is.
- c) Look in the pro forma invoice from the supplier: What is the total surface of insulated area (surface of insulation material) in m²? (Not the living space area, the insulated area!)

3. Replacement of outside windows

- a) Ask the client what kind of windows he / she want to replace: single or old double glazed windows? Select the appropriate answer in eSave.
- b) Inform the client that the new windows must be modern double glazed windows as a minimum standard. (Single glazed windows are not eligible measures in eSave.)
- c) Ask the client what his / her current heat supply system* is.
- d) eSave requires that you enter the total surface of replaced windows in m². Look in the pro forma invoice of the supplier provided by the Client. Here the dimensions of the new windows should be included. Calculate the window-space area. Enter the surface sum of all the replaced windows in m² in eSave.

4. Replacement of outside doors

- a) Inform the client that the new doors must be pre-insulated doors (most modern doors are pre-insulated).
- b) Ask the client what his / her current heat supply system* is.
- c) eSave requires that you enter the total surface of replaced doors in m². Ask the client or look in the pro forma invoice provided by the door-supplier to find the dimensions of the new doors in m². Calculate the space area for the doors. Enter the surface sum of all replaced doors in m² in eSave.

5. Installation of new radiators in combination with installation of thermostatic valves

- a) Ask the client what his / her current heat supply system* is.
- b) Next, ask the client if the building concerned is with or without thermal insulation.
- c) Finally, ask the client what the total heated area in m² is.
(This is the room area that will be heated with the new radiators)

6. Replacement of non-regulated pumps for central heating system with new electronically regulated pumps

- a) Inform the client that the new pump has to have electronic regulation to be eligible for eSave.
- b) Look in the pro forma invoice or the technical description which the client got from the supplier for the new pump: What is the electric power of the new pump in Watt (W)?

Input details required for standard measures

7. Financing of new residential buildings (for Croatia only)

- a) Check on page 2 of the energy performance certificate to see how much the specific annual useful heating energy is allowed to be (QH, nd) in $kWh/m^2/yr$.
- b) Check on page 2 of the certificate again to find how much the specific annual useful heating energy is? The reference is the climatic conditions (QH, nd) in $kWh/m^2/yr$.
- c) Next, on page 1 of the certificate, you find how large the heated space is in m^2 .
- d) Finally, look at page 2 of the certificate again to find the type of heating system (and fuel) and select the appropriate one from the drop-down menu in eSave.

8. Financing of new non-residential buildings (for Croatia only)

- a) Check on page 2 of the energy performance certificate to see how much the specific annual useful heating energy is allowed to be (QH, nd) in $kWh / m^3/yr$.
- b) Check on page 2 of the certificate again to find how much the specific annual useful heating energy is? The reference is the climatic conditions (QH, nd) in $kWh/m^3/yr$.
- c) Next, on page 1 of the certificate, you find how large the heated space is in m^3 .
- d) Finally, look at page 2 of the certificate again to find the type of heating system (and fuel) and select the appropriate one from the drop-down menu in eSave.

9. Replacement of a conventional heating system by a heat pump

- a) Ask the client what his / her current heat supply system* is.
- b) Ask the client (or look in the pro forma invoice from the supplier) what type the new heat pump is. (It can be, air to water, ground source or water to water).
- c) Next, eSave will require that you to select the type of heating for the heated area. Ask the client if the heating in the building is (primarily) under floor heating or radiator heating.
- d) Finally, look in the pro forma invoice from the supplier to find out what the total installed heating capacity of the planned new heat pump is - **in kW!**

10. Thermal solar systems for hot sanitary water

- a) Ask the client what his / her current hot water preparation system* is.
- b) Look in the pro forma invoice from the supplier to see what the total surface area of solar panels is in m^2 . Please note that the maximum allowed collector (solar panel) surface for this measure is $50 m^2$. Projects with larger areas must be treated as non-standard measures.

11. Installation of an on-grid photovoltaic system

- a) Look in the pro forma invoice provided from the PV supplier to see what the installed capacity of the PV modules **in kWp** will be.

12. Replacement of incandescent (conventional) bulbs with CFL (energy efficient) bulbs

- a) Look in the pro forma invoice provided by the supplier to the client to see what the bulb power in Watt (W) is.
- b) eSave requires for this measure that you enter the total electric power of new bulbs in Watt (W). To get the total power, multiply the power of the new bulbs with the number of new bulbs to be financed, e.g. for 5 bulbs with 10 W the total power will be $5 \times 10 = 50 W$

Input details required for standard measures

13. Replacement of old fluorescent lamps with modern T5 lamps with electronic ballast

- a) Look in the pro forma invoice provided by the supplier to the client to see what the lamp power in W is.
- b) eSave requires for this measure that you enter the total electric power of new bulbs in Watt (W). To get the total power, multiply the power of the new bulbs with the number of new bulbs to be financed, e.g. for 5 bulbs with 10 W the total power will be $5 \times 10 = 50$ W

14. Replacement of an old single axle tractor

- a) First, ask the client for what kind of crop the tractor is mainly used. Select the appropriate option from the eSave drop-down menu (Options are: Alfalfa, Forage maize, Maize, Rapeseed, Soybean, Sugar beet, Sunflower, Wheat, Winter barley, Others). If the tractor is used for many different crops, select „Others“.
- b) Then find out the size of the production area (field size) where the tractor will be mainly used. Enter the production area in hectares in eSave.
- c) Ask the client about the year of manufacture of the old (current) tractor and then select it from the drop-down menu in eSave.
- d) Finally, check with the client (or look in the technical specifications available for the new tractor), what the manufacture year for the new tractor is and then select this year from the drop-down menu in eSave.

15. Replacement of an old double axle tractor

- a) First, ask the client what kind of crop the tractor is mainly used for. Select the appropriate option from the eSave drop-down menu (Options are: Alfalfa, Forage maize, Maize, Rapeseed, Soybean, Sugar beet, Sunflower, Wheat, Winter barley, Others). If the tractor is used for different crops, select „Others“.
- b) Then find out the size of the production area (field size) where the tractor will be mainly used. Enter the production area in hectares in eSave.
- c) Ask the client in which year the old (current) tractor was manufactured and then select this year from the drop-down menu in eSave.
- d) Ask the client, or look in the technical specifications available for the new tractor, in which year the new tractor was manufactured and select this year from the drop-down menu in eSave.
- e) You also need to find out the specific characteristics/equipment/technology of the new tractor. It can be: High efficiency, ECU, Power Boost, CVT, E PTO, Tire pressure regulation, Front three point hitch. This information should be available in the pro forma invoice or technical specifications for the tractor, in case the client does not already know it. Go through each checkbox listed in eSave to see if the tractor possesses these special features and/or technologies;
- f) The final step is to ask the client if the new tractor possesses a GPS system and then select the appropriate option in eSave (options are „No“, Yes: „Auto steering“ and Yes „Manual steering“).

16. Agricultural implements

- a) First ask the client what land cultivation technology he / she is mainly using and select the appropriate answer from the drop-down menu in eSave. The options are: reduced tillage, mulch tillage, strip tillage, direct seeding in furrows, direct seeding in holes. The client should know this when asked.
- b) Directly ask the client, or look in the pro forma invoice provided for the measure, to find out what specific implement is being financed and select it from the drop-down menu. The options are: heavy cultivator, chisel, disk tool, harrow, oscillating machine, partial width toll, row ridger, disk ridger, disk coutler openers, knife coultter openers, knife disk opener, rotary opener, oscillating opener.
- c) Next, find out what kind of crop the implement is mainly used for, then select the appropriate option from the drop-down menu in eSave. The options are: Alfalfa, Forage maize, Maize, Rapeseed, Soybean, Sugar beet, Sunflower, Wheat, Winter barley, Others). If the implement is used for several different crops, select „Others“.
- d) Finally, ask the client what size the production area of the intended agricultural implement is in hectares. Enter the total production area in hectares in eSave.

Input details required for standard measures

17. Heat recovery at dairy farms

- a) First, ask the client what type of heat recovery he/she wants to get financed and implemented and select the appropriate option from the drop-down menu in eSave. It can be: Simple heat exchanger or a Heat exchanger with refrigeration system and condenser.
- b) Ask the client how many cows he has at the farm and enter this number in eSave
- c) Ask the client what is the fuel for existing preparation of hot/lukewarm water (options are electricity, heating oil and natural gas) and find and select the answer in the drop-down menu.

18. Combine Harvester

- a) Ask the client about the size of the production area (harvested field) for which the new combine harvester will be used. It has to be expressed in hectares per year (ha/year).
- b) Find out through asking the client in which year the old harvester (to be replaced) was produced.
- c) Finally, ask the client in which year the new harvester (to be purchased) was produced.

19. Replacement of irrigation systems

- a) Ask the client how large the irrigated area is (in hectares).
- b) Next, ask the client which type of existing i.e. old irrigation system he is using. Options are: surface irrigation, sprinkler irrigation and dripping irrigation and then select from the drop-down menu the appropriate
- c) Ask the client and select from the drop-down menu the appropriate type of new irrigation system. Options are: surface irrigation, sprinkler irrigation and dripping irrigation.
- d) Ask the client and select from the drop-down menu the appropriate power source (type of motor which runs the pump for irrigation) for the old system.
- e) Ask the client and select from the drop-down menu the appropriate power source (type of motor which runs the pump for irrigation) for the new system.

20. Conversion of cars running on gasoline to CNG (compressed natural gas)

- a) Ask the client in which year the measure will be implemented.
- b) Ask the client what is the year of car manufacture.
- c) Ask the client what is the current average fuel (gasoline) consumption. The default value in eSave is 8 liters/100 km but this can be changed.

21. Refrigeration Appliances EU Label

- a) Tell the client that he/she must provide the copy of the EU label from the supplier to show that the refrigeration appliance energy class is A+, A++ or A+++.
- b) Ask the client and select from the drop-down menu the energy class from the Energy label (can be A+, A++ or A+++).
- c) Read from the EU label that the client provided what is the energy consumption of the refrigeration appliance in kWh/annum and enter the value in eSave.

22. Washing Machine EU Label

- a) Tell the client that he/she must provide the copy of the EU label from the supplier to show that the washing machine energy class is A+, A++ or A+++.
- b) Ask the client and select from the drop-down menu the energy class from the Energy label (can be A+, A++ or A+++).

Input details required for standard measures

- c) Read from the EU label that the client provided what is the energy consumption of the washing machine in kWh/annum and enter the value in eSave.

23. Dishwasher EU Label

- a) Tell the client that he/she must provide the copy of the EU label from the supplier to show that the dishwasher energy class is A+, A++ or A+++.
- b) Ask the client and select from the drop-down menu the energy class from the Energy label (can be A+, A++ or A+++).
- c) Read from the EU label that the client provided what is the energy consumption of the dishwasher in kWh/annum and enter the value in eSave.

24. Oven EU Label

- a) Tell the client that he/she must provide the copy of the EU label from the supplier to show that the oven energy class is A, A+, A++ or A+++.
- b) Ask the client and select from the drop-down menu the energy class from the Energy label (can be A, A+, A++ or A+++).
- c) Read from the EU label that the client provided what is the energy consumption of the oven in kWh/cycle (upper consumption value from the label) and enter the value in eSave.

25. Air conditioning EU Label (cooling and heating)

- a) Tell the client that he/she must provide the copy of the EU label from the supplier to show that the air conditioning energy class is A, A+, A++ or A+++
- b) Ask the client and select from the drop-down menu the energy class from the Energy label for heating (for green region) and/or for cooling (can be A, A+, A++ or A+++). Select “No heating” if the air conditioning does not support heating. Select “No cooling” if the air conditioning does not support cooling.
- c) Read from the EU label that the client provided what the energy consumption of the air conditioning is. In the field for heating, enter a zero (0) if the Air Conditioning does not support heating. If it does, enter the consumption for heating in kWh/annum for green regions. In the field for cooling, enter a zero (0) if the Air Conditioning does not support cooling. If it does, enter the consumption for cooling in kWh/annum.

26. Energy services and supply businesses

- a) Ask the client for which energy service or supply business the loan will be used.
- b) Enter the total revenues of the company in the previous fiscal year.
- c) Enter the revenues related only to EE/RE production or service from previous year.

Note! For this measure (Energy services and supply businesses), you only need to specify the services or products in the field of energy efficiency or renewable energy that the client is providing. eSave does not calculate the energy and CO2 savings for this measure, it is a special case and only valid for this standard measure.

Input details required for standard measures

*Heat supply input data required for eSave Standard Measures

Many Measures require the client to provide information about their current and planned **heat generation system** for their home / office. Due to that, this guide contains a special chapter for the input requirements for heat supply system.

Regarding eSave **input for the heat supply system**, you will normally have to ask the client the following questions:

No	Question	Option and details required
1	What is your current heat generation system?	<p>District heating system, please specify if the system is:</p> <ul style="list-style-type: none"> a) With CHP* (see explanation on CHP at the bottom) b) Without CHP * (see explanation on CHP at the bottom)
		<p>Central heating system, please specify when it was installed:</p> <ul style="list-style-type: none"> a) Installed before 1990 b) Installed between 1990 and 2000 c) Installed after 2000
		<p>Decentralized heaters, please specify what kind of heaters are used:</p> <ul style="list-style-type: none"> a) Air-conditioning b) Radiators, radiant heater, storage heater c) Stove
2	What will be the future heat generation system? (to be financed with the green loan)	<p>District heating system, please specify if the system will be:</p> <ul style="list-style-type: none"> a) with CHP b) without CHP
		<p>Central heating system, please specify the type of boiler:</p> <ul style="list-style-type: none"> a) Condensing boiler b) Non-condensing boiler
		<p>Decentralized heaters, please specify if the system will be:</p> <ul style="list-style-type: none"> a) Air-conditioning
3	What fuel is the current / new heating system using?	<p>In many cases you will be prompted by the software to select the fuel of the heating system. In those cases, ask the client what fuel the heating system operates on.</p> <p>The options depend on the heating system selected but should be one of the below listed:</p> <ul style="list-style-type: none"> a) Coal (black coal, anthrazite) b) Lignite (lignite, lignite briquettes) c) Biomass(chopped firewood, pellets) d) LPG e) Natural gas f) Heating oil g) Electricity

Explanation of CHP District Heating System:

CHP (Cogeneration) stands for “combined heat and power” and represents simultaneous production of electric energy and heat.



Quick Reference Guide
ANNEX 2
Definition of standard measures

TABLE OF CONTENT:

1. Measure classifications	1
2. Standard Measure Definition table	2

1. Measure classifications

For standard measures certain assumptions are predefined in eSave. That means that these measures are in general eligible for the RE/EE project or credit line. All data for the calculation of energy as well as CO2 emission saving are fixed and included in the background of eSave already. This means that **only the measure specific data** such as the surface of area the walls being insulated or the number of lightning bulbs exchanged must be inserted in eSave by the user for Standard Measures.

Measures not covered by standard measures are called Non-Standard Measures. The measure specific data for the Non-Standard Measures are provided by the Energy Consultant appointed by GGF when conducting an Energy Assessment on behalf of the Financial Institution.

Definition of standard measures

2. Standard Measure Definition table

In the table below, all the Standard Measures available for the EE/RE Credit Line in eSave are defined and explained.

Measure group	No	Standard Measure Name	Measure definition and requirements for financing
Buildings	1	Replacement of old heat supply system by modern boiler for central heating systems	<p>This measure means the replacement of an old heat supply system with a new one based on input data from both systems.</p> <p>Inside eSave there are different options for the current heat supply systems (the one which will be replaced) as well as alternatives for the new heat supply systems (the new system that will be installed). All systems have the corresponding fuels assigned. The fuel must also be identified with input provided by the client. eSave diversifies between:</p> <ul style="list-style-type: none"> a) Central heat supply systems with own heat generation b) District heating. c) Decentralized heaters are also included <p>By selecting the correct options for the current as well as the new heat supply system, eSave calculates the energy savings and CO2 emission reduction and compares it with the eligibility criteria for the credit line.</p>
	2	Building insulation of outside walls and roofs	<p>Starting point for this measure is the current situation; meaning that outside walls and ceilings on the building are without existing thermal insulation at the moment. The measure must include installation of thermal insulation with common materials (e.g. styrodur, mineral wool) with a minimum thickness of 5 cm.</p> <p>Please note - The insulation material can be thicker than 5 cm, but it cannot be less than 5 cm. If the Insulation is less than 5 cm thick, the measure is not eligible for funding from the RE/EE credit line.</p>
	3	Replacement of outside windows:	<p>This measure covers only outside windows where the current windows are either single glazed / non-insulated windows or old double glazed windows and which should be replaced through the financed activity.</p> <p>The currently existing single glazed or old double glazed windows must be replaced by new double glazed windows with modern thermal insulation glazing as a minimum standard.</p> <p>It is not possible to replace the current windows with new single-glazed windows, because single-glazed windows are not energy efficient and not eligible for the RE/EE credit line.</p>
	a. Replacement of old single glazed windows by new windows with modern thermal insulation glazing.		
	b. Replacement of old coupled windows (double glazed) by new windows with modern thermal insulation glazing.		

Definition of standard measures

Measure group	No	Standard Measure Name	Measure definition and requirements for financing
	4	Replacement of outside doors	<p>This measure means the replacement of non-insulated outside doors with <i>new modern pre-insulated doors</i>.</p> <p>The current situation is non-thermally insulated doors. Please note that <i>inside doors are not eligible</i> for this measure.</p>
	5	Installation of new radiators in combination with installation of thermostatic valves	<p>In the current situation the installed radiators have manually regulated valves. The radiators are used for space heating. This measure requires the <i>installation of new radiators in combination with thermostatic valves</i>. It is also possible to finance the associated pipe work required for this measure through the RE/EE credit line.</p>
	6	Replacement of non-regulated pumps for central heating system by new electronically regulated pumps	<p>The requirement for this measure is the replacement of the currently installed pumps (in the hot water heating system for space heating), which are working without electronic regulation, by <i>new pumps with electronic regulation</i>.</p> <p>The current situation is a central heating system producing hot-water for space heating. The current pumps for the hot-water are non-regulated pumps working without electronic regulation.</p>
	7	Financing of new residential buildings (only for Croatia)	<p>The financing of new residential buildings is eligible when an <i>energy performance certificate</i> is available <i>and</i> the stated <i>energy consumption is less than 80% of the maximum allowed energy consumption</i>.</p> <p>All necessary information for eSave eligibility check are given in the energy performance certificate. Please note that only the first two pages of the certificate contain important information for eSave.</p> <p>Financing up to 50% of total building costs, excluding property, can be accepted and <i>only for new residential buildings</i>. Already existing buildings can't be financed at all.</p>
	8	Financing of new non-residential buildings (only for Croatia)	<p>Financing of new non-residential buildings is eligible when an <i>energy performance certificate</i> is available <i>and</i> the stated <i>energy consumption is less than 80% of the maximum allowed energy consumption</i>.</p> <p>All necessary information for eSave eligibility check are given in the energy performance certificate. Please note that only the first two pages of the certificate contain important information for eSave.</p> <p>Financing up to 50% of total building costs, excluding property, can be accepted and <i>only for new non-residential buildings</i>. Already existing buildings can't be financed at all.</p>

Definition of standard measures

Measure group	No	Standard Measure Name	Measure definition and requirements for financing
Use of RE/EE by households and businesses	9	Replacement of a conventional heating system by a heat pump	This measure requires similar input data as Standard Measure 1 (“Replacement of old heat supply systems”). The difference is that in this measure the conventional heat generation system is replaced by a heat pump. The measure includes installation of a heat pump driven by electricity with the heat sources: ground, water or air.
	10	Thermal solar systems for hot sanitary water	With this measure, the client wishes to install a new thermal solar system for hot water production with flat-plate collectors . The maximum collector surface allowed is 50 m ² . Note – this Measure is for production of hot sanitary water and not for energy or heat.
	11	Installation of on-grid photovoltaic system	This measure contains the installation of a new photovoltaic system with PV panels (solar panels) for electricity production. The system has to be connected to the grid to be eligible.
Lighting	12	Replacement of incandescent bulb by CFL	Classical (old-fashioned) incandescent bulbs as a light source in a space or location are replaced by modern CFLs (compact fluorescent lamps) . The current situation is that the space is illuminated by classic incandescent bulbs and these bulbs are replaced by modern CFL.
	13	Replacement of old fluorescent lamps by modern T5 lamps with electronic ballast	In the current situation the space is illuminated by older fluorescent lamps (of type T8 or T12) with electromagnetic ballasts. These fluorescent lamps should be replaced by modern fluorescent lamps (type T5) with electronic ballasts. Normally, the lamps as well as the luminous elements have to be replaced.
Agri-equipment	14	Replacement of an old single axle tractor	Here the requirement is the replacement of an old single axle tractor by a newer one. The eligibility depends on the age of the old tractor and the age of the new tractor. This is calculated by eSave after input of old and new tractor data provided by the client and inserted in the tool.
	15	Replacement of an old double axle tractor	Requirement for this measure is the replacement of an old double axle tractor by a newer one. There are also some options for additional equipment which can be selected. The eligibility is calculated by eSave and depends on the age of the old tractor, the age of the new tractor as well as on selected additional equipment.
	16	Agricultural implements	This measure covers a broad range of tools collected under the label of “Agricultural implements” . Eligible for financing here are agricultural implements which reduce the energy consumption of field processes by improved tillage (reduced, conservation and strip tillage) and seeding (direct seeding and seeding in holes). The eSave calculator shows specific eligible equipment.

Definition of standard measures

Measure group	No	Standard Measure Name	Measure definition and requirements for financing
	17	Heat recovery at dairy farms	This measure includes the installation of heat recovery system specifically for dairy farms . It means that heat from the extracted milk will be used during the cooling process to preheat lukewarm or hot water and thus re-use the milk heat to heat water. Eligible is the installation of simple heat exchanger as well as the installation of a heat exchanger with additional refrigeration system condenser heat recovery .
	18	Combine Harvesters	This measure is for Replacement of combine harvesters and is eligible when the fuel consumption of the new combine harvester is at least 15% less than the consumption of the combine harvester which is to be replaced.
	19	Replacement of irrigation systems	This measure contains different kind of irrigation systems . By replacing old inefficient systems by new systems, eSave will calculate the energy savings and conduct the eligibility check for this measure. Depending on the type of the old system, especially the type of irrigation (surface, sprinkler or dripping) and the type of motor which runs the pump, various savings can be realized.
Vehicles	20	Conversion of cars running on gasoline to CNG (compressed natural gas)	Conversion of vehicles (cars) which are running on gasoline by implementation of a CNG-tank , safety installations and additional equipment for the usage of CNG as fuel. Please note - Financing of new cars already running on CNG is not eligible. Additionally, the car intended for the measure can't be older than 10 years.
Electrical household appliances with EU label	21	Refrigeration Appliances with EU Label	Replacement of the old refrigerator appliance (refrigerators, freezers, combined appliances) with the new one with EU Label class A+ or higher. (More info about EU Labels in QRG Annex 4)
	22	Washing Machine with EU Label	Replacement of the old washing machine with the new one with EU Label class A+ or higher. (More info about EU Labels in QRG Annex 4)
	23	Dishwasher with EU Label	Replacement of the old dishwasher with the new one with EU Label class A+ or higher. (More info about EU Labels in QRG Annex 4)
	24	Oven with EU Label	Replacement of the old oven with the new one with EU Label class A or higher. (More info about EU Labels in QRG Annex 4)
	25	Air Conditioning with EU Label (includes only cooling, only heating and both cooling and heating units)	Replacement of the old air conditioning unit with a new unit with EU Label class A or higher. The measure includes air-conditioners for only cooling, only heating and units which are for both cooling and heating. (More info about EU Labels in QRG Annex 4)

Definition of standard measures

Measure group	No	Standard Measure Name	Measure definition and requirements for financing
<p>Energy services and supply businesses</p>	<p>26</p>	<p>Energy services and supply business</p>	<p>This measure is for financing companies working in the RE/EE sector, either providing RE/EE related services or manufacturing RE/EE equipment. These companies, through their business support the increasing usage of RE/EE services and products (e.g. a company whose main activity is the production of housing insulation materials) and the goal is to expand their business.</p> <p>The requirement is that the <i>RE/EE services or products are the primary activity of the company asking for financing</i> i.e. that at least 75% of the company's annual revenues are related to RE/EE related services or the production of RE/EE equipment.</p> <p>The activities eligible for financing for the client include all eSave standard measures listed in this table. Other measures might be financed by the Fund too but this will be decided on a case by case basis. Generally, both <i>investments costs</i> as well as <i>working capital</i> can be financed.</p>



Quick Reference Guide
ANNEX 3
Non-Standard Measures

TABLE OF CONTENT:

1. Procedure for Non-Standard Measures	1
2. Typical Non-Standard Measures	2
3. Start the Energy Assessment.....	4
4. The results of the Energy Assessment goes into eSave.....	4

1. Procedure for Non-Standard Measures

Measures not covered by standard measures are called **Non-Standard Measures**.

For Non-Standard Measures the framework conditions regarding requirements are not pre-defined. Characteristic for these measures are that they are generally more complex so that standardized calculations cannot be performed. What is sure however, is that **also Non-Standard Measures must meet the requirements of the credit line to be eligible for financing**.

An **Energy Consultant** appointed by GGF will do the eligibility check of Non-Standard Measures for the client on behalf of the Financial Institution. This is called an **Energy Assessment**. Please note: In this case the eligibility check is not done by eSave, but the results of eligible Non-Standard Measures must be inserted in eSave for monitoring and reporting reasons.

The **Energy Consultant** will start the Energy Assessment only after receiving a filled out form with basic information about the proposed Non-Standard Measure from the Financial Institution. The results of the **Energy Assessment** are summarized on the first page of the Energy Assessment report. This page is all that is needed to insert the eligible Non-Standard Measure in eSave.

On the next page you will find a table which provides an overview and examples of typical Non-Standard Measures with some explanations.

Non-Standard Measures

2. Typical Non-Standard Measures

Below is a table which gives an overview of typical Non-Standard Measures and shows the measure groups to which they belong.

Measure group	No	Names of typical non-standard measures in eSave	Explanations:
Buildings	1	Air conditioning and ventilation systems, sun-protection, BMS	BMS = Building management system
Complex heat supply and distribution systems	2	Industrial heating processes, CHP, DH-systems, substations, piping, ICA etc.	<p>CHP = Combined heat and power or Cogeneration is the simultaneous production of electricity and heat, both of which are used.</p> <p>DH-systems = District heating supply systems are systems distributing heat generated in a centralized location to residential and commercial heating requirements located somewhere else. DH-systems can provide either (or both) space heating and water heating.</p> <p>Substations = house heating systems or heating units in apartments that handle the heat transfer from the district heating pipes into a home in order for the end-user to get hot water and heat on demand.</p> <p>Piping = construction work and pipes (materials) belonging to the heat supply and distribution systems.</p> <p>ICA = Instrumentation, control and automation</p>

Non-Standard Measures

Measure group	No	Names of typical non-standard measures in eSave	Explanations:
Use of RE by households and businesses	3	Bigger thermal solar systems, bigger heat pumps, geothermal, hydro-PP, wind-PP etc.	<p>Bigger sized heat pumps. A heat pump is a device that transports heat energy from a source of heat to a destination. Examples of smaller sized heat pumps are air condition or refrigerators. A typical bigger heat pump could be for heating or cooling a whole residential / industrial building</p> <p>Geothermal Energy = energy derived from the heat of the earth. Geothermal power is cost effective, reliable, sustainable and environmentally friendly and as such an eligible renewable energy.</p> <p>Hydro Power Plant. Hydropower plants capture the energy of falling water to generate electricity. Hydropower plants range in size from "micro-hydros" that power only a few homes to giant dams that provide electricity for millions of people.</p> <p>Wind Power Plant. The terms "wind energy" or "wind power" describe the process by which the wind is used to generate mechanical power or electricity.</p>
Use of RE for commercial energy generation	4	All RES for commercial energy generation	<p>RES = Renewable Energy Sources Renewable Energy is energy that is collected from resources which are naturally replenished such as sunlight, wind, rain, tides, waves, and geothermal heat.</p>
Lighting	5	Complex lighting systems, street lighting	Lighting projects using energy efficiency or renewable energy, such as street lighting with LED lights.
Agricultural equipment	6	Agricultural machinery which is not available as standard measure.	E.g. bulldozers etc.
Vehicles	7	Commercial vehicles like buses and trucks	This measure includes both buses for people transportation as well as trucks for goods transport.
Improvement in processes, process related equipment	8	Compressed air, motors and drives, pumps and fans, frequency inverters, heat recovery, chillers, ICA	This measure foresees an investment for industry or Small and Medium Sized Enterprises (SMEs) that wish to implement Energy Efficiency improvement or Renewable Energy solutions in processes or process related equipment. Examples are usage of Compressed air, motors and drives, pumps and fans, frequency inverters, heat recovery, chillers, ICA Heating.

Non-Standard Measures

3. Start the Energy Assessment

For Non-Standard Measures, the first step after identification of Measure is to **give the Energy Consultant the assignment of conducting an Energy Assessment** of the proposed Non-Standard Measure. The Energy Consultant will provide training at the Financial Institution and at that time also introduce a standardized Form to fill out to start the work of Energy Assessments. If you do not already have access to this Form, please contact your eSave Resource Person or Manager.

4. The results of the Energy Assessment goes into eSave

The Energy Consultant will summarize the results from the Energy Assessment in a standardized report. The **first page** of the report directly shows if the proposed Measure is eligible or not for the EE/RE credit line. **If eligible**, the data from the Energy Assessment Report must be inserted in eSave. For this, first choose the appropriate Loan Product and Measure in eSave before **entering the report data in the following 5 steps, of which each is shown as a separate field in eSave:**

- a) Brief description of investment
- b) Primary energy consumption (current situation)
- c) Primary energy consumption (expected after realization)
- d) CO2 emission (current situation)
- e) CO2 emission (expected after realization)



Quick Reference Guide
ANNEX 4
EU Labels for household appliances

TABLE OF CONTENT:

1. EU Label for household appliances - intro.....	2
2. EU Label for a fridge (refrigeration appliances)	2
3. EU Label for Oven	3
4. EU Labels for Air-conditioning	4
5. Air-conditioning for cooling only	4
6. Air-conditioning for heating only	4
7. Air-condition for both cooling and heating	5

Input details required for EU-Labels

1. EU Label for household appliances - intro

For all measures from this group, the input requirements are **energy class** and **energy consumption**. Both are specified on the EU Energy Label placed on each household appliance.

For all household appliances, except for oven, the energy consumption is calculated on the annual basis as kWh/annum (kilowatt-hours per annum).

For ovens, energy consumption is expressed in kWh/cycle.

2. EU Label for a fridge (refrigeration appliances)

After entering the cost data, you first need to select the energy class of the new appliance and then enter the energy consumption, specified on the EU Energy Label.

The options (i.e. minimum requirements) for the energy class vary depending on the appliance. For example, for Refrigeration appliances the minimum requirement for energy class is A+. Therefore, the options are A+, A++ and A+++.

Please see the requirements for each appliance in Annex 1 or Annex 2.

Energy consumption of the fridge from the label pictured right, amounts to **280 kWh/annum**.

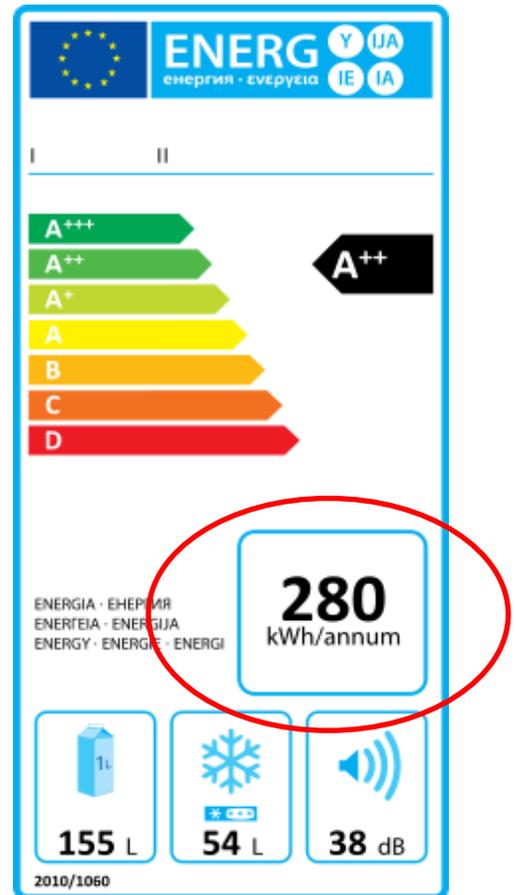


Figure 1: Fridge EU Label

Input details required for EU-Labels

3. EU Label for Oven

For ovens, energy consumption is expressed in **kWh/cycle** (not in kWh/annum), as mentioned above.

Another special feature in the EU Labels for ovens is that they show two consumption values. Only the upper placed consumption value on the EU label must be entered into eSave.

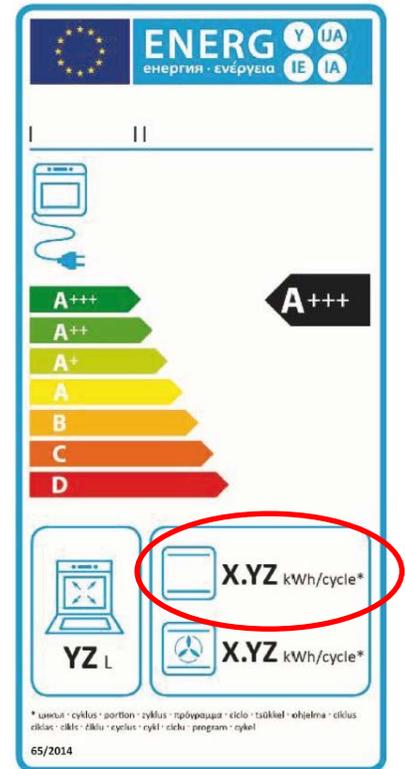


Figure 2: Oven EU Label

Input details required for EU-Labels

4. EU Labels for Air-conditioning

For air-conditioning, the EU Label contains three different variations; only cooling, only heating and both cooling and heating are possible options. Each of the versions are described below.

Both energy class and energy consumption can be found on the EU label for all the air conditioner. The energy consumption is expressed in kWh/annum.

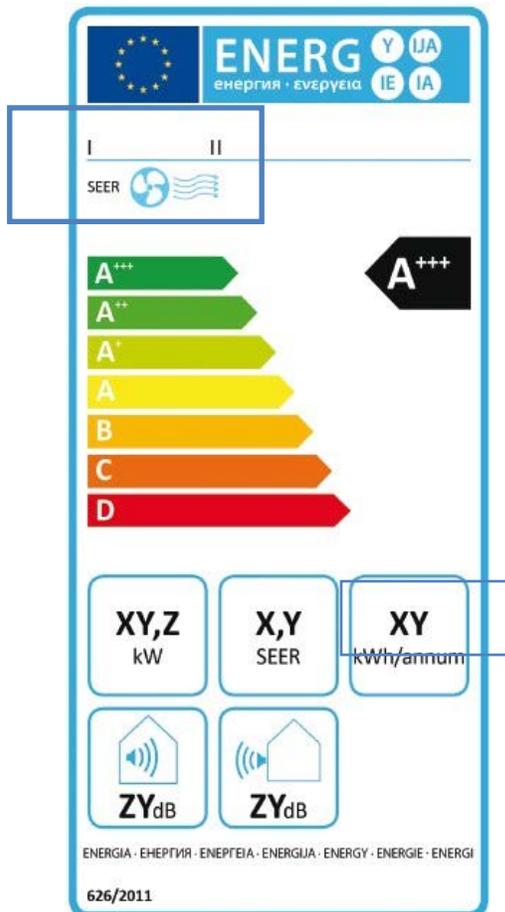


Figure 4: COOLING Air-conditioning EU Label

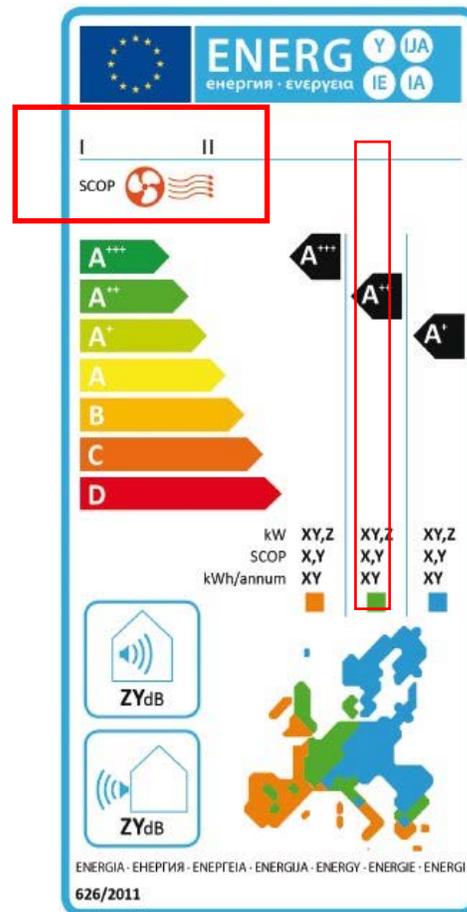


Figure 4: HEATING Air-conditioning EU Label

5. Air-conditioning for cooling only

In case of air-conditioning only for cooling, eSave requires the selection of **energy class** together with the input of **energy consumption** in kWh/annum for cooling. First select the available heating option called: “No heating”. Then insert the value of the energy consumption for heating as 0 (zero) in the appropriate eSave field.

6. Air-conditioning for heating only

If the air-conditioner support heating only, the **energy class** for the green region specified on the EU label together with the **energy consumption** for heating in kWh/annum has to be entered into eSave. Here the first selection for the available heating option is called “No cooling”. For an only heating device, a zero (0) should be inputted into eSave as energy consumption for cooling.

Input details required for EU-Labels

7. Air-condition for both cooling and heating

In case of the air-conditioning providing both cooling and heating (Figure to the right), eSave requires the selection of **energy class** for both heating and for cooling to be inserted into the tool.

This is true also for **energy consumption**; eSave requires data input from both heating and cooling for energy consumption in this situation.

This is no problem, as all required input can be found on the EU label of the air-conditioner appliance.

The **cooling data is located on the left side** of the label and the **heating data on the right side** of the label.

The energy consumption is expressed in **kWh/annum**.

For heating, the data relevant for eSave for both energy class and energy consumption must be extracted from the middle column; these are the values within the green region on the label.

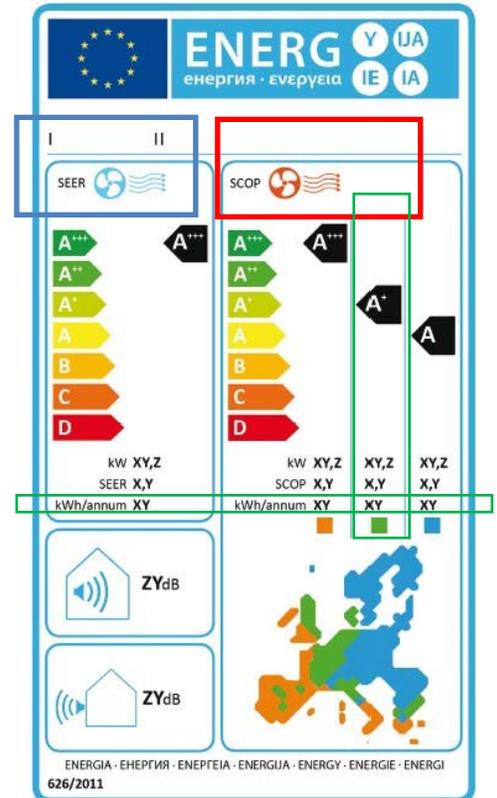


Figure 5: Air condition cooling AND heating EU Label