

AID FOR ENVIRONMENTAL PROTECTION

SIMPLIFIED GUIDE FOR COMPANIES

Version of 20 October 2022



THE GOVERNMENT
OF THE GRAND DUCHY OF LUXEMBOURG
Ministry of the Economy



LUXINNOVATION
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DISCLAIMER

The aim of this simplified guide is to provide companies with guidance regarding the implementation of the amended Luxembourg Law of 15 December 2017 on aid schemes for environmental protection (hereinafter “the Law”). It is not legally binding and its authors may not be held liable in any way whatsoever. The Law is the sole authentic basis for identifying the conditions regarding each article.

Please send any comments or suggestions to the following e-mail address:

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INTRODUCTION

Companies are more intent than ever on helping to protect the environment and fight climate change, regardless of their size or their business sector.

So, how can they do their bit? What are their options to receive state aid? How can they apply for and initiate this aid?

The aim of this guide is to answer these questions, within the scope of the environmental protection measures covered by **the amended Law of 15 December 2017 on aid schemes for environmental protection** (Mémorial A no. 1108) (hereinafter “the Law”).

This Law provides for a series of financial aid measures to help companies cover some of the extra cost of their investments to protect the environment and, therefore, to encourage them to take such measures.

It goes without saying that this simplified guide does not replace the Law or the “**Applicant’s guide**”, a more comprehensive vade mecum which can be downloaded at guichet.lu.

It aims to make SMEs (but not exclusively) aware of the opportunity to take environmental protection measures and to encourage them to apply for the available aid measures to shoulder the associated financial burden.

SCOPE

A GUIDE BASED ON FOUR AID MEASURES

Out of the ten aid measures provided for by the Law, this guide focuses on the four measures which are most likely to interest the greatest number of small and medium-sized enterprises (SMEs):

MAXIMUM APPLICABLE AID RATE BASED ON ADMISSIBLE COSTS

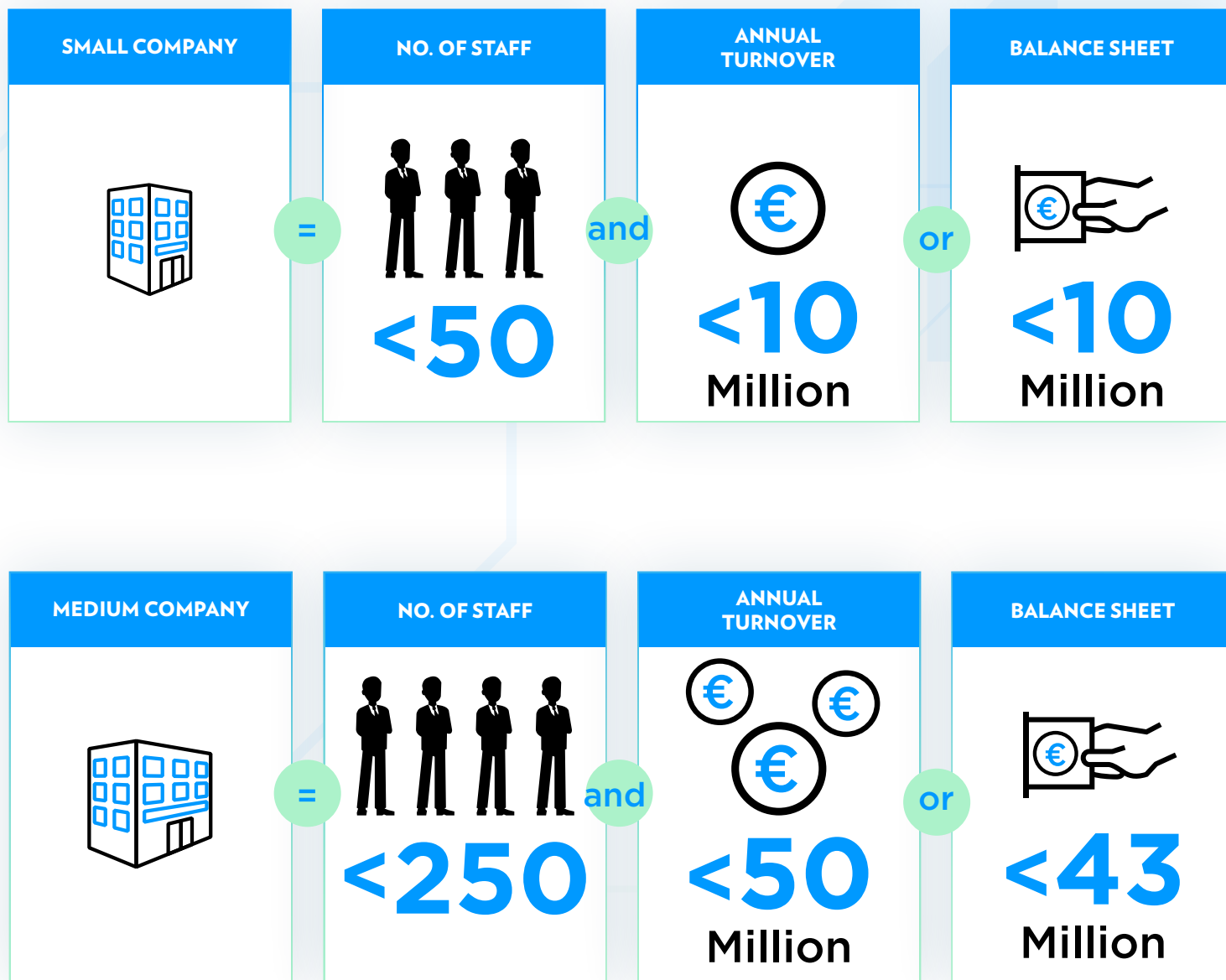


	SMALL COMPANY	MEDIUM COMPANY	LARGE COMPANY
 Fit 4 Sustainability and environmental studies (<i>Art.14</i>)	70%	60%	50%
 Going beyond environmental standards (<i>Art.4</i>)	60%	50%	40%
 Energy efficiency (<i>Art.6</i>)	50%	40%	30%
 Production of renewable energies (<i>Art.9</i>)	65%	55%	45%



WHAT IS AN SME?

CRITERIA



- The aid rate varies according to the size of the company (*small, medium or large*)
- These thresholds take into account the **single economic entity** perimeter (*broad notion of a "group"*)



FIT 4 SUSTAINABILITY AND AID FOR ENVIRONMENTAL STUDIES

FIT 4 SUSTAINABILITY

THE OPPORTUNITY TO CALL ON EXTERNAL EXPERTS

FIT4 SUSTAINABILITY

OBJECTIVES

Thanks to this programme, companies can obtain:

- **An environmental study** to assess the impact of their activity on the environment based on the chosen work area(s) (**water, energy, circularity, etc.**)
- **A quantified action plan:** the study is supplemented with a list of recommended actions (**investments, implementation of good practices, etc.**) to reduce this impact in the relatively short term.

The programme is implemented by consultants who are approved by Luxinnovation.

The duration of the consultancy depends on its complexity, i.e. the number of issues dealt with and the size of the company, whereby the maximum duration is six months.

The consultancy is co-funded by the Ministry of the Economy (**up to 70% for a small company, 60% for a medium company and 50% for a large company**).

FOR WHOM?

The **Fit 4 Sustainability** programme is intended for all Luxembourg companies in the private sector, regardless of their size or business sector, i.e. commercial, industrial, artisanal, etc.

HOW?



Contact Luxinnovation:
fit4sustainability@luxinnovation.lu



Website:
<https://www.fit4sustainability.lu>





AID FOR ENVIRONMENTAL STUDIES **Art. 14**

Obtain targeted expertise with a view to making a specific environmental investment.

Choosing a technology, budgeting for an investment and its long-term operation, and quantifying the environmental impact often requires access to external expertise in addition to the company's business knowledge. Companies are therefore strongly recommended to seek help from experts before investing in an environmental measure. In some cases, this expertise is obligatory (**for example to certify whether an investment goes beyond environmental standards**).

THESE STUDIES MAY QUALIFY FOR STATE AID UNDER THE LAW, PROVIDED THEY MEET THE FOLLOWING CONDITIONS:

- ✓ The study is not imposed by a regulatory injunction (*e.g. **obligatory energy audit, environmental impact study imposed by a competent authority, etc.***)
- ✓ The study must provide the technical, environmental and economic data required to make a decision to invest in an environmental measure.
For example:

- ✓ Assessment of the various technological options prior to an investment project in order to identify the most appropriate solution (***technical and economic feasibility***)
- ✓ Detailed design of a specific measure identified in an obligatory energy audit
- ✓ Life-cycle analysis prior to an investment project in order to assess the overall impact in terms of environmental protection
- ✓ Energy integration study to pinpoint the opportunities to optimise, recover and recycle heat

- ✓ The study must be carried out by an independent and qualified external service provider

The granting authority (***the Ministry of the Economy***) assesses **the financial burden** of the study to justify the incentive effect of the aid on the basis of the company's financial resources and the economic stakes for the company in the field covered by the study

Eligible costs

The costs of the study carried out by an external service provider, with a maximum aid rate of:

70% for small companies,
60% for medium companies and
50% for large companies.

AID FOR ENVIRONMENTAL INVESTMENTS: GENERAL PRINCIPLES

NATIONAL LEGAL FRAMEWORK/ELIGIBILITY CRITERIA

MAIN ASSESSMENT CRITERIA



Incentive effect: all aid applications must be submitted prior to the commencement of work/placement of orders (binding acts)

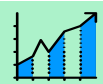


Innovation / **environmental protection effect**

New installation/component which goes beyond the standard
Generating savings in energy, resources and pollutant emissions



Co-financing capacity



Economic impact/return on investment

NON-ELIGIBLE COMPANIES



Undertaking in difficulty

For all companies (other than SMEs in existence < 3 years), when over half of their capital (+ share premiums) has been consumed due to cumulative losses



Example of an undertaking in difficulty:

Own funds: **€50k**

Share capital: **€200k**

ELIGIBLE/NON-ELIGIBLE COSTS

ELIGIBLE:

- Companies which exercise an economic activity in Luxembourg, provided they have a business permit and the necessary operating permits
- Efficient, innovative or untapped environmental protection techniques
- Only the intrinsic technical components of the measure in question, i.e. which give rise to the environmental protection effect
- The external services required to implement the environmental protection measure
- The leasing costs under a leasing arrangement with an obligation to purchase the asset at the end of the term

NON-ELIGIBLE:

- Works which are not directly linked to increasing the level of environmental protection
- The necessary investments to comply with a legal or regulatory injunction
- Dismantling and removing old equipment
- Roof and façade works
- Costs related to land, civil engineering, repairing trenches (**excluding wind turbine foundations**), buildings and constructions intended to accommodate installations
- Measures with a very positive return on investment and for which the aid would not have a significant incentive effect

Requests for the permits needed to operate the technical installations subject to the application must be submitted to the competent authorities before the deliberation of the State Aid Committee.

The beneficiary/operator principle must be adhered to.



EXAMPLES OF INVESTMENT COSTS WHICH MAY BE ELIGIBLE



GOING BEYOND ENVIRONMENTAL STANDARDS **Art.4**

Innovative and efficient technology



Types of environmental protection measures which are eligible under Art. 4

- Filters or other devices which can substantially reduce pollutant emissions below the current level (*in the absence of standards*) or the ceilings stipulated in environmental standards
- Equipment to help drastically reduce the consumption of water or another resource





ENERGY EFFICIENCY Art.6

- Whatever the energy efficiency measure, it must lead to substantial energy savings in order to be eligible (**e.g. > 20%**)
- Installation of production equipment with a higher energy performance than that of standard technologies
- Voluntary reinforcement of the heat insulation of a furnace or a production workshop to reduce the energy consumption required to maintain the temperature
- Installation of frequency converters (**retrofitting of pumps, ventilation, traction motors, etc.**) resulting in substantial energy savings
- Compressed-air installations using booster pumps
- Process heat exchangers/heat recovery systems (including process heat pumps)
- Storage systems (**only if part of a waste heat recovery project**) such as steam accumulators or hot water tanks
- Absorption and adsorption cooling systems
- IT solutions which optimise the overall energy efficiency of industrial processes leading to substantial final energy savings



PRODUCTION OF RENEWABLE ENERGIES Art.9

- Biomass boilers
- Biogas/biomethanation installations
- Hydrothermic or hydroelectric installations
- Heat pumps for heating buildings
- Wind turbines and wind farms
- Solar thermal systems

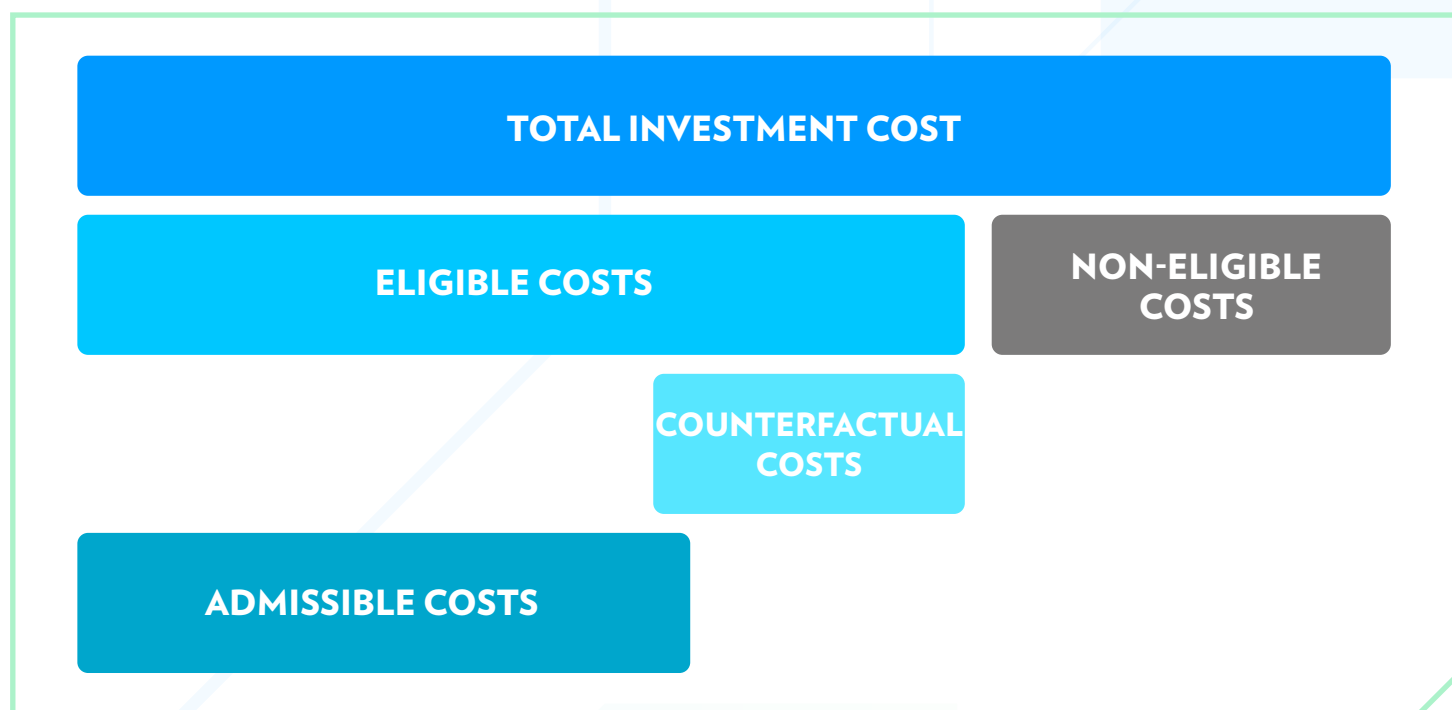


CALCULATION OF COSTS WHICH ARE ADMISSIBLE FOR AID

Investment aids for the protection of the environment help companies cover some of the extra costs directly associated with better protecting the environment

To calculate these extra costs, it is necessary to distinguish between:

- The total investment cost
- The eligible costs
- The admissible costs



Regarding the Fit 4 Sustainability programme or technical/economic environmental studies (**Art. 14**), all of the eligible costs form the basis of the admissible costs to which the aid rate of 50%, 60% or 70% applies, depending on the size of the business.

From the total investment cost to the eligible costs

Costs which are not directly linked to increasing the level of environmental protection are not eligible.



EXAMPLE CALCULATION OF ADMISSIBLE COSTS

Business A intends to replace its gas boiler (which is nearing the end of its useful life) with a biomass boiler. This investment is eligible for investment aid for energy produced from renewable sources (**Art.9**)

Business A has the following quote:

Total quote = €160,000, including:

€10,000 for dismantling and removing the gas boiler

€5,000 for expanding the doorway to the technical room (because the new biomass boiler is bulkier than the gas boiler being replaced).

€12,000 for installing the new biomass boiler

€133,000 for the cost of the biomass boiler

As a result:

Total investment =

€160,000

Non-eligible costs =

€15,000

The costs of removing the old boiler and enlarging the doorway do not have a direct effect on protecting the environment and are therefore not eligible.

Eligible costs = €145,000

From the eligible costs to the admissible costs

Only the extra costs which are directly linked to better protecting the environment are eligible for aid. These extra costs are the admissible costs on which the aid amount is calculated.

Depending on the situation, these admissible costs might be:

- ▀ lower than the eligible costs, after deduction of a counterfactual reference
- ▀ equal to the eligible costs, in the absence of an alternative or in the event of additionality

Deduction of a counterfactual reference

In most cases, the extra costs of an environmental protection investment are determined with reference to a similar less environment-friendly investment which would have been plausible if the aid measure did not exist: **the counterfactual reference**. The difference between the costs of the two investments represents the extra cost associated with environmental protection and thus the “admissible cost”.



Let's take the example of Business A:

We already determined that the **eligible** costs amount to **€145,000**. If Business A decided to replace its current gas boiler with a state-of-the-art gas boiler which complies with standards it would cost the company **€85,000**

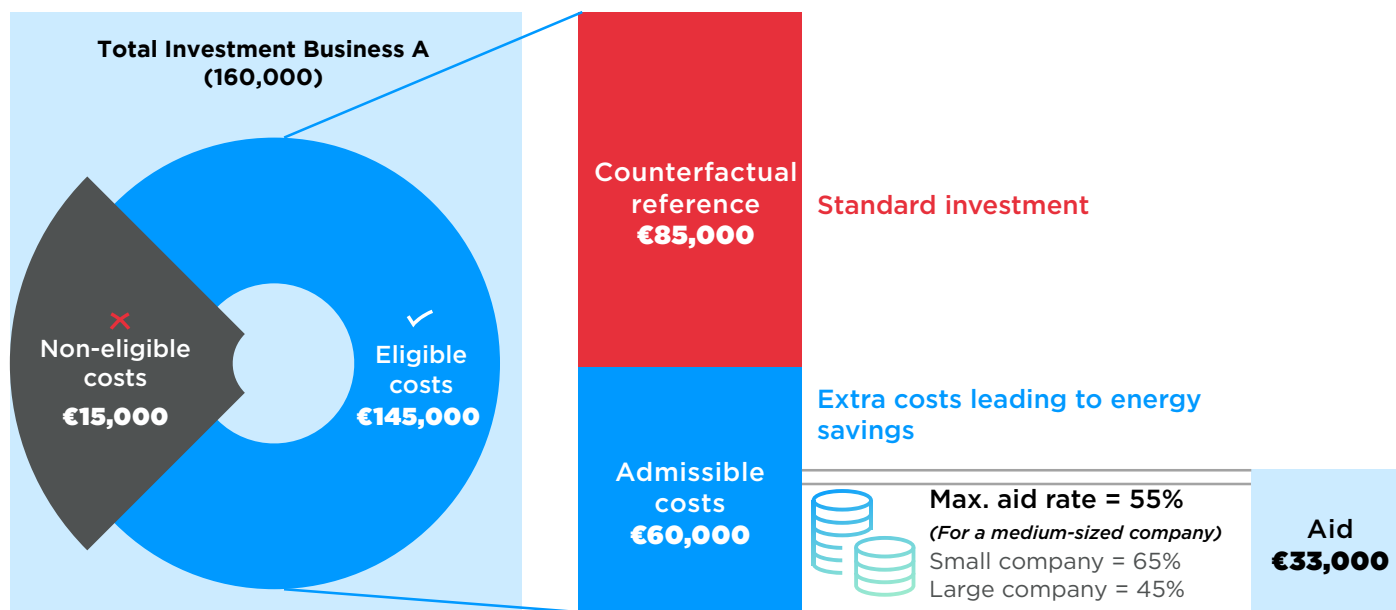
This gas boiler represents the counterfactual reference: It would comply with the latest standards and cost less to purchase than a biomass boiler, but it would still be powered by a fossil fuel. The cost of this new gas boiler, i.e. **€85,000**, represents the value of the counterfactual reference.

This leads to the following result for Business A's project:

Total investment = **€160,000**
Eligible costs = **€145,000**
Admissible costs = **€60,000**



In this case, **Business A**, a medium-sized company, could request a maximum aid rate of **55%** for the **€60,000** of admissible costs, i.e. a maximum aid amount of **€33,000** for its project to invest in a biomass boiler (investment aid for a renewable energy production system). In relation to the total investment cost of **€160,000** the effective aid rate for Business A's overall investment would therefore be **20.6%** maximum.



CALCULATION OF ADMISSIBLE COSTS IN THE EVENT OF ADDITIONALITY

In some cases, if the environmental protection investment can be identified as an additional and optional distinct investment, the eligible cost of this additional equipment is the admissible cost, without the deduction of a counterfactual reference:

EXAMPLE 1:

1 - In a Commodo-compliant production unit, adding an extra gas treatment component or an additional filter in the exhaust stack would help to further reduce the level of pollutant emissions, well-below the limit specified in the "Commodo" Law.

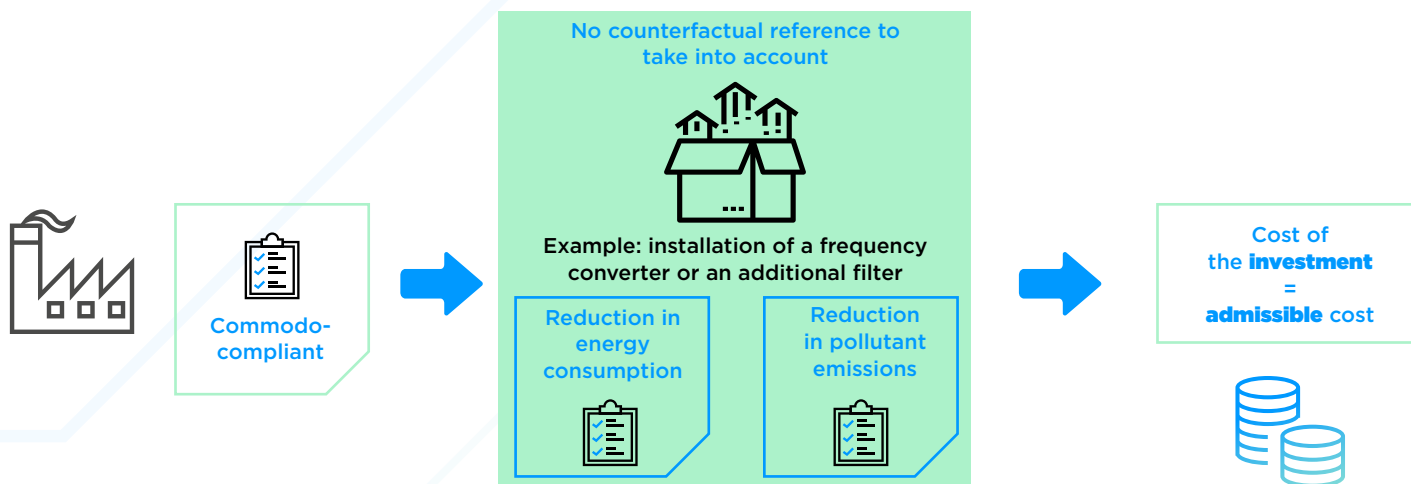
2 - The cost of the filter and its installation is both the eligible cost and the admissible cost for aid (*in this case, aid for going beyond standards, Art. 4*)

EXAMPLE 2:

1 - Adding a frequency converter to a pump system which is already in place (*retrofit*) would help to substantially reduce the annual electricity consumption.

2 - The cost of the frequency converter and its installation is both the eligible cost and the admissible cost for aid (*in this case, aid for energy efficiency, Art. 6*)

Distinct identifiable investment



In all cases, some of the extra cost directly linked to the company's decision to invest in more environment-friendly technology remains at the company's expense. The financial aid helps to cover some of the company's extra cost and therefore encourages it to take initiatives to better protect the environment.

In addition, as we will see in the following section, this incentive effect of State aid must also be assessed in the light of the other economic incentives intrinsic to the investment planned by the company. In fact, some investments that involve an additional cost at the time of purchase may be offset over time by operating savings. This is notably the case for most energy measures.



RATE OF AID AWARDED AND INCENTIVE EFFECT

The amount of aid awarded for an environmental protection investment project depends on:

- The admissible costs of the project (*which could be much lower than the total cost of the investment project*)
- The aid rate awarded

Remember that the aid rates indicated above per type of measure are **the maximum rates**. In many cases, the rate actually awarded may be lower, or even zero.

The determining factor in the aid rate awarded is compliance with the incentive effect criterion: the aid must have an **incentive effect** on the company's investment choice in favour of better environmental protection. However, in many cases, over time such investments which are more expensive to purchase can also generate **substantial savings** in operating costs (*especially regarding energy*) or even profits.

When these savings (*or profits*) rapidly offset the investment cost, they can be considered as a sufficient **incentive effect** in themselves, even without any aid. The Ministry of the Economy therefore assesses the investment aid rate to be awarded on a **case-by-case basis**, according to a return on investment forecast submitted by the company together with its application for aid. These elements are important so that the Ministry can ensure **the proportionality of the aid awarded**.

Reminder: compliance with the incentive effect criterion also implies that a project which has already begun or for which commitments have already been made cannot benefit from any aid. Aid applications must be submitted to the Ministry before undertaking any acts which commit the project (*acceptance of quotes, making of advance payments, business commitments, etc.*)



AID FOR ENVIRONMENTAL INVESTMENTS: CASE STUDIES

CASE STUDY 1

ADDITIONALITY



Business B

Activity: production of sweet desserts

Size: medium-sized company

Current situation: company needs process heat to make its preparations. Heat currently generated by a gas boiler.

Project: to install a thermal solar system to substantially reduce the gas boiler's energy consumption (*but without replacing it*)

ENVIRONMENTAL IMPACT:

SAVING OF
2,500 M³
OF GAS PER YEAR,
I.E.
5 T CO₂

ECONOMIC IMPACT:

ANNUAL SAVINGS ON

**COST
OF GAS**

EXTRA EXPENSES
(maintenance)

COSTS:

TOTAL PROJECT COST:

€35,000

Including reinforcing the roof

€5,000

Including thermal solar equipment

€30,000

ELIGIBLE COSTS:

€30,000

Roof reinforcement not eligible

ADMISSIBLE COSTS:

€30,000

Additional equipment
=> no counterfactual deduction

AID CALCULATION:

MAXIMUM AID RATE BASED ON ADMISSIBLE COSTS:

55%

(Medium-sized company, aid for renewable energy production, Art. 9)

AID RATE APPLIED:

40%

INTRINSIC SAVING OF THE PROJECT:

- Payback period
- Return on investment on the service life of the equipment (savings in the cost of gas, extra expenses, etc...)

PROPORTIONALITY:

- With similar aid schemes (for individuals or municipalities)
- With other comparable projects

AMOUNT OF AID AWARDED:

€12,000

i.e. an aid rate of:

- 40% of the admissible costs
- 34% of the total project cost

CASE STUDY 2

COUNTERFACTUAL REFERENCE



Business C

Activity: industrial ironwork

Size: small company

Current situation: company uses tailor-made gas furnace to heat metal parts. Furnace badly insulated, heat loss and excessive gas consumption. Furnace needs reinsulating.

Project: renovate the furnace by replacing the current insulation with more expensive but better-quality refractories for a longer service life.

ENVIRONMENTAL IMPACT:

SAVING OF
18,000 M³
OF GAS PER YEAR,

I.E.
43,5 T CO₂

ECONOMIC IMPACT:

ANNUAL
SAVINGS ON
**COÛT
DU GAZ**

COSTS:

TOTAL PROJECT COST:

€175,000

Including removing the current insulation:

€25,000

Including the purchase and installation of new refractories:

€150,000

ELIGIBLE COSTS:

€150,000

(Cost of removing replaced equipment is not eligible)

COUNTERFACTUAL VALUE:

(Identical renovation with standard insulation):

€110,000

ADMISSIBLE COSTS:

€40,000

Additional cost of the most energy efficient solution compared to a standard solution

AID CALCULATION:

MAXIMUM AID RATE BASED ON ADMISSIBLE COSTS:

50 %

(Small company within the scope of energy efficiency aid, Art. 6)

AID RATE APPLIED:

50 %

ELEMENTS TAKEN INTO ACCOUNT WHEN CALCULATING THE AID RATE:

- Playback period:
- Return on investment on the service life of the equipment (savings in gas costs, etc.).

PROPORTIONALITY:

- With similar aid measures;
- With other comparable projects

AMOUNT OF AID AWARDED:

€20,000

i.e.:

- 50 % of the admissible costs
- 11,4 % of the total project

CASE STUDY 3

LACK OF INCENTIVE EFFECT



Business D

Activity: fizzy drinks production

Size: medium-sized company

Current situation: the motors of the conveyor belt system constantly run at full speed.

Project: to install frequency converters (*retrofit*)

ENVIRONMENTAL IMPACT:

ANNUAL ELECTRICITY
SAVING OF

92 MWh

I.E.

34 T CO₂

ECONOMIC IMPACT:

SAVINGS IN

**ENERGY
CONSUMPTION**

COSTS:

TOTAL PROJECT COST:

€14,000

ELIGIBLE COSTS:

€14,000

ADMISSIBLE COSTS:

€14,000

Additional equipment => no counterfactual deduction

AID CALCULATION:

MAXIMUM AID RATE BASED ON ADMISSIBLE COSTS:

40%

(Medium-sized company with respect
to energy efficiency aid, Art.6)

AID RATE APPLIED:

0%

INTRINSIC SAVING OF THE PROJECT:

- Payback period
- Return on investment on the service life of the equipment
(Saving in electricity cost, etc.)

PROPORTIONALITY:

- With similar aid measures;
- With other comparable projects

Given the low investment cost and its significant impact on Business D's annual electricity consumption, the electricity savings would make the investment profitable within less than two years.

This investment is therefore economically justified without any aid.

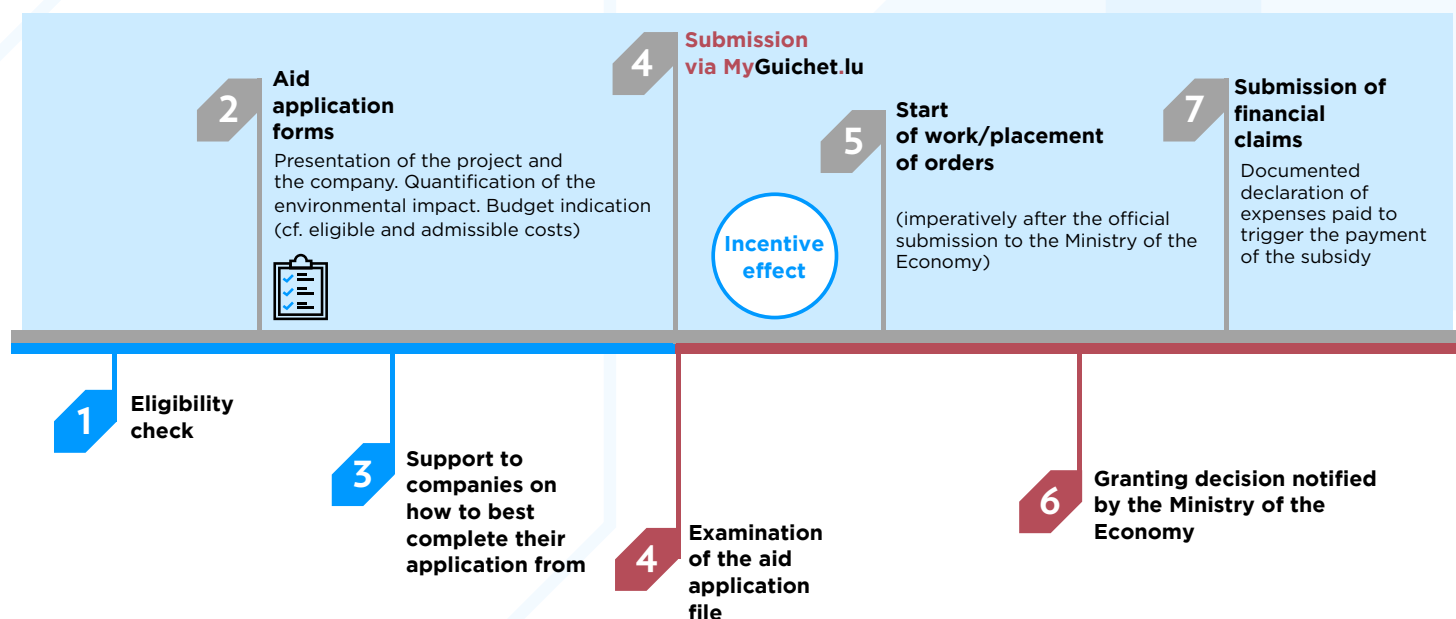
The aid has no incentive effect and therefore cannot be awarded.

HOW TO APPLY FOR AID



HOW TO APPLY FOR AID AND SUPPORT FROM LUXINNOVATION

STAGES OF AN APPLICATION FOR ENVIRONMENTAL AID TO THE MINISTRY OF THE ECONOMY



RECOMMENDATIONS

What should companies do?

- Estimate their costs and describe the chosen investment in comparison with a counterfactual reference
- Estimate the return on investment period of the measure if it generates profits or helps to avoid costs
- Explain the investment's positive impact on the environment
- Submit requests for any permits required to operate the equipment
- Submit their aid application via [MyGuichet.lu](https://myguichet.lu)

How can Luxinnovation help?

- Methodological support
- Help deciphering regulations/laws/exceptions
- Advice and networking
- Help using aid application templates

INFORMATION TO PREPARE FOR AID APPLICATIONS



FIT 4 SUSTAINABILITY AND ENVIRONMENTAL STUDIES [Art.14](#)

- Description of the purpose of the study and the intended environmental protection objective
- Detailed quote specifying the services to be provided (**NB: no binding commitments should be made before submitting the aid application in order to comply with the incentive effect criterion!**)



FOR ALL INVESTMENT AID APPLICATIONS:

- Brief description of the project including deadlines (start, finish)
- Technical description of the measure and the associated equipment
- Investment cost
- Description and cost of the counterfactual reference
- Calculation of a return on investment in the event of expected profits/savings from implementing the measure during the lifespan of the investment
- Operating permits (**or status of any pending applications**) where applicable



GOING BEYOND ENVIRONMENTAL STANDARDS [Art.4](#)

- List of the relevant standards (**where applicable, the result of an analysis by an independent expert - this service is eligible for environmental study aid**)
- Quantification of level of exceedance of standards or of level of improvement where no such standards exist (**where applicable, the result of an analysis by an independent expert - this service is eligible for environmental study aid**)
- Term/lifespan of the investment



ENERGY EFFICIENCY [Art.6](#)

- Intrinsic energy data related to the measure (**e.g. installed capacities, outputs, operation time, etc.**)
- Amount of energy saved and its annual equivalent in tonnes of CO₂
- Unit cost of the energy saved
- Hypothesis of price changes during the lifespan of the investment measure
- Other savings or costs during the lifespan of the investment (**maintenance, etc.**)



PRODUCTION OF RENEWABLE ENERGIES [Art.9](#)

- Intrinsic energy data related to the measure (**e.g. installed capacities, outputs, operation time, etc.**)
- Type and quantity of the replacing energy/energy replaced (**if replaced**)
- Unit cost of the replacing energy/energy replaced
- Hypothesis of price changes during the lifespan of the investment measure
- Feed-in tariff, heat premium or any other aid
- Other savings or costs during the lifespan of the investment (**maintenance, etc.**)



PRACTICAL INFORMATION

USEFUL LINKS

 [Investment aid for environmental protection](#)

 [Applicant's guide](#)

 [Soumission via MyGuichet.lu](#)

CONTACT

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