



Sustainable construction guide

Bauhäremapp

Maacht
mat beim
Klimaschutz!

EN



Schëtter

**Administration communale
de Schuttrange**

2, place de l'Eglise
L-5367 Schuttrange

+352 35 01 13 - 1
www.schuttrange.lu



KlimaPakt | EUROPEAN
ENERGY
AWARD
Meng Gemeng engagéiert sech



Klima-Bündnis
Lëtzebuerg

NaturPakt
Meng Gemeng engagéiert sech



The sustainable construction guide is a document intended for builders wishing to construct or renovate a building on the territory of the Schuttrange commune. The topics of the guide cover the different aspects of sustainable construction. Each of the topics summarises recommendations on techniques to be implemented, strategies to be followed, information on the various aids available and useful links to go deeper into the matter.

Français



Lëtzebuergesch



English



Available financial aid

Throughout the guide, this pictogram means that financial aid is available.



The table below shows the actors who offer support for the different facilities listed in this guide.

Topic	Subject	Financial aid			
		State	Energy supplier	Nova Natur-Stroum Fund	Schuttrange commune
General	Study and sustainable concept				
Energy - Electricity	Photovoltaic panel				
	Energy-efficient household appliances				
	System for self-consumption of electricity				
	Energy monitoring system				
Energy – Heat	Solar panel - Auxiliary solar heating				
	Solar panel – Solar hot water				
	Heat pump				
	Controlled mechanical ventilation with heat recovery unit				
	Energy monitoring system				
	Building insulation (renovation)				
Rainwater	Rainwater harvesting infrastructure				
Mobility	Charging station for electric vehicles				
	Intelligent management system for charging electric vehicles				
Environmental damage	Particle filter for a wood-burning stove or boiler				
Resources	LENOZ certification				
	New construction LENOZ certified				
	Compost implementation				

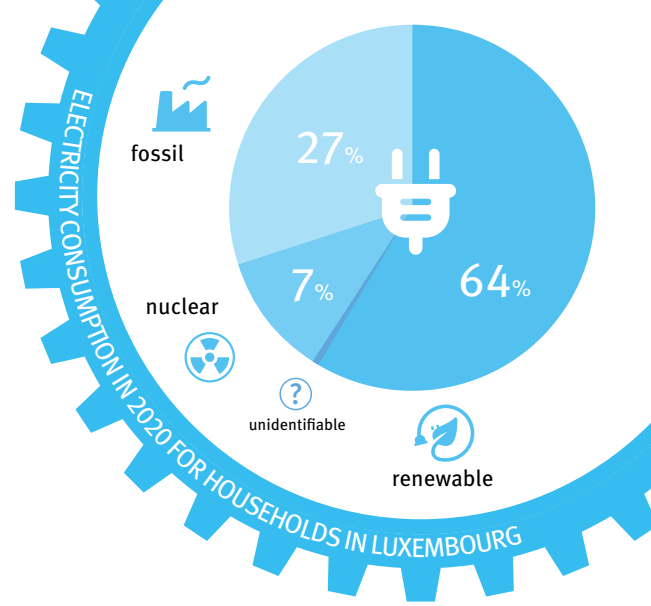
Aid simulator of Klima-Agence



energy electricity



” How to reduce one’s electricity costs while saving CO₂?



Getting advice



Choosing appropriate installations such as ...



photovoltaic panels with the possibility if appropriate to self-consume the produced electricity



Acting on buildings ...



opting for LED lighting with presence detectors



installing solar protections that decrease air conditioning requirements



avoiding to place heat-producing appliances next to refrigeration appliances

Making good use of electricity while ...



opting for energy-efficient household appliances



Taking a step further by ...



subscribing to a green electricity contract



installing an electricity consumption monitoring system



investing in the local energy cooperative EnerCoop Syrdall

Useful links

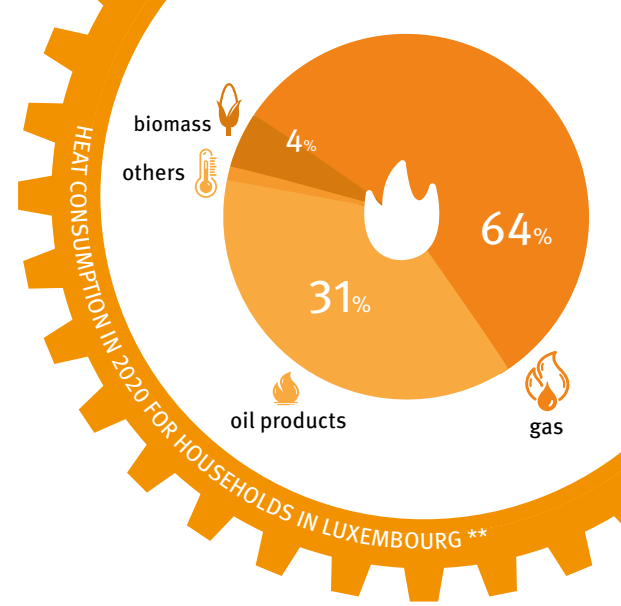
www.klimaagence.lu | www.oekotopten.lu | www.calculix.lu

*Source: Stotec - Composition du mix national de l'électricité fournie aux clients finals (2020)

energy heat



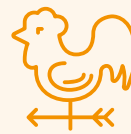
” How to reduce one’s heating costs while saving CO₂?



Getting advice



8002 1190 (free hotline)



optimising solar gains by directing the glass parts of the building to the south

Acting on buildings by ...



aiming the thermal insulation class A⁺ on the energy performance certificate (new construction)
insulating in an appropriate way (renovation)



ensuring the compactness of the building

Choosing appropriate installations such as ...



geothermal heat pumps



thermal solar panels



mechanical ventilation control systems with:



- Canadian wells
- heat recovery units



Taking a step further by ...



installing a smart monitoring and regulation system for the consumption of heat and the mechanical ventilation control system



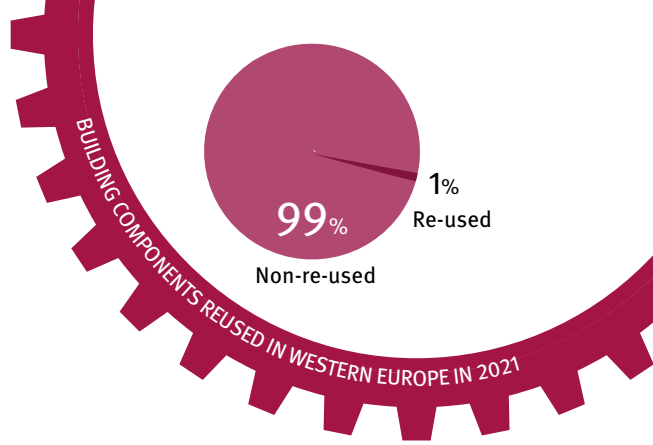
Useful links

www.klimaagence.lu

**Source: Statec - Consommation finale d'énergie selon les différentes utilisations et par forme d'énergie (2020)
*In case of renovation



” How to build according to circular economy principles and anticipate future resource flows ?



Getting advice



☎ 8002 1190 (free hotline)

Certify one's building by ...



opting for certification

LENOZ



Separating ...

biological products *(regenerated by nature)*



wood

- biosourced
- biodegradable



straw

- untreated



cork



hemp

*Sustainable material labels:
Cradle2Cradle, FSC, PEFC, Blauer Engel*

and technical products *(recycled by humans)*



metal

- containing recycled materials



glass

- recyclable



plastic

- non-toxic to the environment



concrete

*Sustainable material labels:
Cradle2Cradle, Blauer Engel, NF Environnement,
Nordic Swan, Umweltzeichen, European Ecolabel*

... and ensuring their disassembly

Correctly anticipating future resource flows by ...



providing the necessary sorting facilities in the kitchen



Providing space for waste bins



setting up a compost



carrying out individual reporting of waste quantities per household in residential buildings

Wondering if ...

- the techniques are sufficiently accessible to facilitate their maintenance?
- the used materials and products are necessary and useful?
- the existing building can be preserved and/or restored?
- spaces and equipments can be multifunctional, adaptable and modular?
- materials and products can be easily disassembled ?

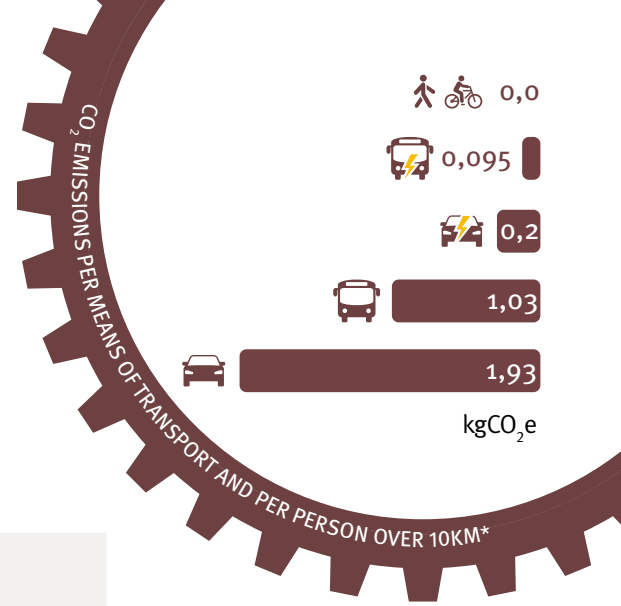
Useful links

lenoz.ehs.lu | www.logement.lu | www.oekozenner.lu | www.klimaagence.lu

sustainable mobility



How to adopt a more sustainable mobility?



Providing bicycle parking

indoors

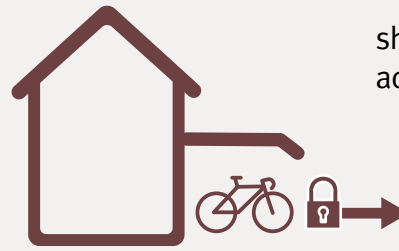
or

outdoors

on the ground floor,
easily accessible
and secure



sheltered, easily
accessible and secure



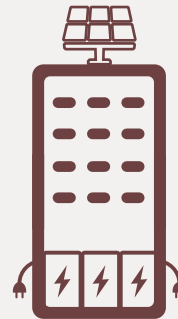
Installing charging stations for electric cars by ...

Single-family building



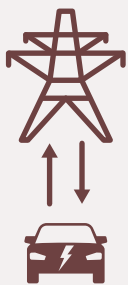
providing capacity
for at least 1 charging
station

Residential building



providing capacity
for each household

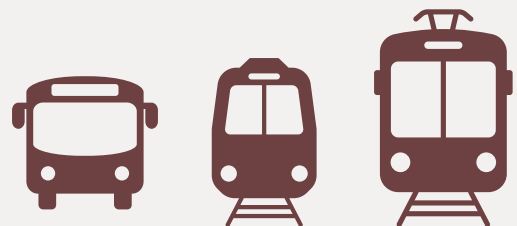
Anticipating the Vehicle2Grid by planning ...



to buy electric vehicles
that allow charging
and discharging
from/to the grid



Don't forget public transport !



Mobiliteit.lu portal

Useful links

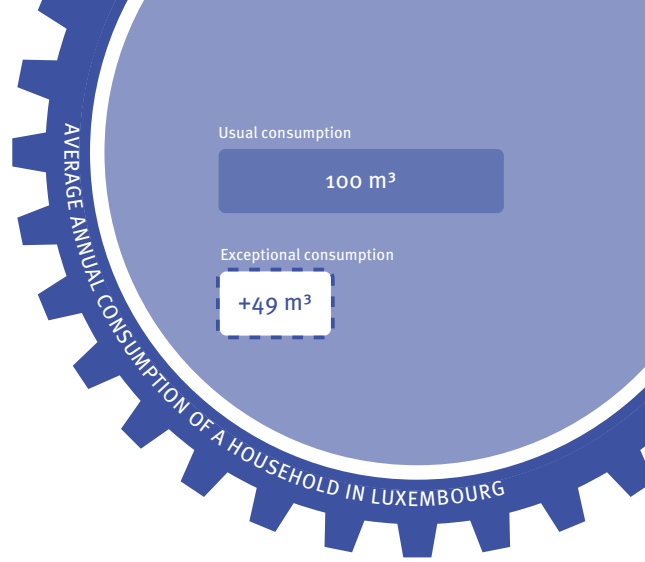
www.carboncounter.lu | www.klimaagence.lu | www.mobiliteit.lu | www.schuttrange.lu

*Source: Ademe - My Transport Impact (2018)

rainwater



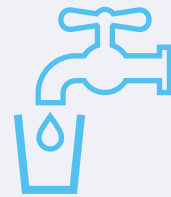
” How to reduce one’s water bill by using rainwater ?



Harvesting rainwater by ...



installing a tank fed by roof gutters



installing separate rainwater and drinking water systems inside the building

Using rainwater for the following purposes



12m³



30m³



10m³

52m³



15m³

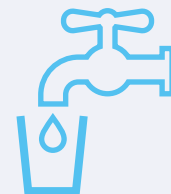


31m³



3m³

49m³



5m³



7m³



36m³

48m³

Useful links

www.eau.gouvernement.lu



” How to reduce one’s water bill by reducing its consumption ?

Monitoring leaks

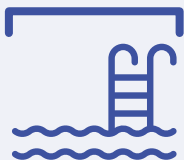


≤ 4 l/h



≤ 25 l/h

Did you know !

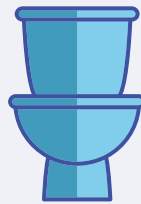


A family pool of about 30m²
can consume up to 260 L/day of use
(hygienic renewal + filter rinsing + evaporation)

Taking ownership of simple gestures



Saving water by ...



- 40%

installing energy-saving dual flushes



- 40%

opting for water-saving appliances



- 50%

installing energy-saving shower heads



- 50%

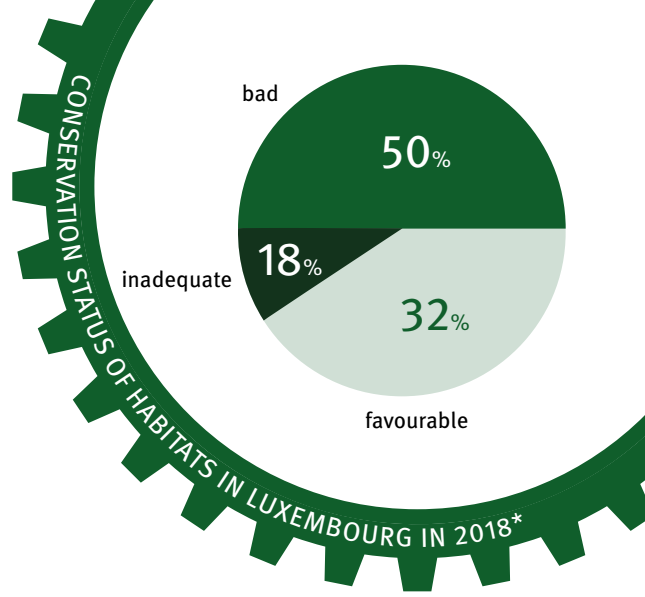
adding flow restrictors to taps and showers

Useful links

outdoor areas



” How to increase the ecological quality of outdoor areas ?



Getting advice



☎ 34 94 10 - 1 ✉ sias@sias.lu

Limiting



parking spaces with coatings



earthwork



floor sealing



mineral or synthetic flooring in gardens

Developing and strengthening the green network by ...



planting trees and hedges



favouring indigenous and diversified flora



installing green roofs and facades



integrating nesting boxes into the building

... to restore habitats and increase biodiversity

Avoiding pesticides



Promoting late mowing



Adapting outdoor lighting**



Adapting outdoor lighting (max. 2700K)

Useful links

www.sias.lu | www.ounipestiziden.lu
www.emwelt.lu | www.naturemwelt.lu

*Source: AEE - Conservation status and trends in Luxembourg (2019)

**see the full recommendations in the "environmental damage" topic

environmental damage

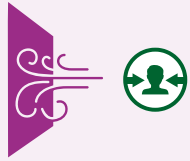


” How to avoid damage to oneself  and the environment  ?



Wrap external technical installations (e.g. heat pumps) with acoustic protection

Noise



Ensure the airtightness of the building



Install triple glazing



Place acoustic screens during the building period



Respect working hours on construction sites as stipulated in the communal regulation

Outdoor lighting



Directing lights towards the ground



Favouring "warm white" lights (max. 2700K)



Turn off between midnight and 6 a.m.



Apply dimming from 10 p.m.



Install presence detectors



Air



Use healthy materials inside and outside the building



Keep odours* away from buildings without disturbing the neighbours



Put filters on mechanical ventilators



Put filters on chimneys of wood-burning stoves and boilers



Protect the surrounding areas of the construction site from dust and other particles



Useful links

