

# Energy analysis “Potenzialcheck”

Technical questionnaire

## General information



The purpose of this questionnaire is to gather as much information as possible about your company and its energy consumption. Please complete it as carefully as possible. The more precise your answers are, the more effective the energy analysis will be.

On **pages 1 to 6**, we ask you to provide **general information** about your activity, the building and your past consumption. This information is essential to enable the energy study to be carried out effectively.

In **pages 7 to 13**, we ask you for **details of your utility equipment**. This information can normally be found on the nameplate of each item.

**You can also attach a photo of the nameplate.**

**If you are not sure of an answer, leave the box blank or write “I don’t know”. We will inspect the equipment during the site visit.**

**Some information (specifically points 2.05, 2.06, 5.03 and 6.01) should be provided as appended documents! Do not forget to send them to us together with your completed questionnaire.**

If you have any questions, please contact:

Design office contact & LOGO

**Thank you very much for your cooperation!**

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**Company details**

Legal name of the company:

Address:

Contact person:

Telephone:

E-mail:

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**Activity**

Type of activity (hotel, workshop, retail business, etc.):

Number of employees:

Maximum number of guests (for hotel/restaurant):

Normal working hours (weekdays, weekends, etc.):

Weekday(s) closed:

Turnover in the past year:

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**Building**

Date of construction:

Date of last renovation  
(if applicable):

Number of floors below  
ground/above ground:

Total surface area in m<sup>2</sup>:

Do you have the Energy  
Performance Certificate  
(Energiepass) for the  
building?

Yes

No

→ Please enclose a copy (5 pages)



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Do you have the  
architectural plans  
for the building?

Yes

No

→ Please enclose a copy

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→ If you answered “No” to the last two questions, please complete the table on the next page.



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## Building envelope

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Please detail the characteristics of the building envelope. You can find this data on the as-built plans, or in the specifications or invoices for the work carried out (if applicable).

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Choose the most appropriate description of your building's exterior walls.

- |              |   |
|--------------|---|
| I don't know | Solid masonry wall, not insulated                     |
|              | Double-wall with insulated cavity                     |
|              | Block or concrete wall, externally insulated          |
|              | Sandwich panels or prefabricated modular construction |

Other:

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Choose the most appropriate description of your windows and bay windows.

- |              |                |              |
|--------------|----------------|--------------|
| I don't know | Single glazing | Wooden frame |
|              | Double glazing | Metal frame  |
|              | Triple glazing | PVC frame    |

Other:

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Choose the most appropriate description of your sun protection.

- |              |  |
|--------------|--|
| I don't know | No sun protection                                      |
|              | External slat blinds, roller shutters, shutters/blinds |
|              | Curtains, interior slatted blinds                      |

Other:

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Indicate the possible comfort problems you encounter most often in your building.

- No particular problems, comfort is generally good
- Too hot in summer
- Too hot in winter
- Too cold in summer
- Too cold in winter
- Cold wall feeling
- Damp feeling
- Annoying draught
- Heavy, stale air, not enough exchange

Other:

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In which areas in particular do you experience these comfort problems?

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## Energy consumption

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What energy sources does your company use?

Electricity:	Yes	No
Natural gas/LPG:	Yes	No
Heating oil/diesel:	Yes	No
Wood for heating:	Yes	No
Heating (district heating):	Yes	No
Cooling (district cooling):	Yes	No
Other:		

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How much does your company spend annually on its energy supply (all types of energy combined)?

btw. €100 and €1,000	btw. €1,000 and €5,000	btw. €5,000 and €10,000
more than €10,000	I don't know	other: €

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Does your company regularly monitor its energy consumption?

No

Yes

→ please attach a table showing your consumption over the past 3 years

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Are there any energy sub-meters installed in your company and, if so, how are they read? (These are meters installed downstream of the main meter to measure the specific consumption of certain systems or parts of systems)

yes, for electricity	automatic reading (BMS)
yes, for heating/hot water	regular manual reading
yes, for air-conditioning	occasional manual reading
no, none/I don't know	no reading/I don't know

Example of a sub-meter:



## Energy bills

Please attach a copy of a recent bill for each type of energy your company uses (electricity, gas, oil, heat, etc.).

The copy must show the meter number or POD and details of the applicable rate.

This information is normally shown on the back of the bill, so please make sure you send us all pages.

See below for an example:

Front:

Facture d'électricité		Décompte annuel	
Pour la période du 27 décembre 2020 au 31 décembre 2021		Luxembourg le 25 janvier 2022	
N° facture:	N° client:	Compte client:	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Date d'échéance: 09/02/2022			
	HTVA €	TVA %	TTC €
Fourniture d'électricité basse tension	2 190,36	8	2 365,59
Acomptes facturés	-1 619,75	8	-1 749,33
<b>Total décompte 8%</b>	<b>570,61</b>	<b>8</b>	<b>616,26</b>
		Total décompte	616,26
Solde de votre compte à la date de cette facture			0,00
<b>Total à payer</b>			<b>616,26</b>

Back:

Relevé compteur	POD				Consommation	Tarif/Référence
N° compteur:	Dates lectures	Ancien relevé	Nouveau relevé			
SAG1888700190819	27.12.2020 - 26.05.2021	25.161,346	lect. Smart	29.891,479	lect. Smart	4 730,000 kWh Energie jour
SAG1888700190819	27.05.2021 - 31.12.2021	29.891,479	lect. Smart	27.657,358	lect. Smart	7 766,479 kWh Consommation
	27.05.2021 - 31.12.2021					40,0 A Puissance souscrite
	27.12.2020 - 26.05.2021					40,0 A Puissance souscrite
<b>Fourniture d'électricité basse tension</b>						
Consommation d'énergie	de	au	Quantité à facturer	Prix unitaire	TVA	Montant HTVA €
Consommation électricité jour	Mai 2021	Déc. 2021	7 766,479 kWh	0,12089 EUR/kWh	8%	938,89
Consommation électricité jour	Janv. 2021	Mai 2021	4 573,000 kWh	0,12089 EUR/kWh	8%	552,83
Consommation électricité jour	Déc. 2020	Déc. 2020	157,000 kWh	0,11819 EUR/kWh	8%	18,54
Prime mensuelle	Mai 2021	Déc. 2021	7,000 mois	3,00000 EUR/mois	8%	35,00
Prime mensuelle	Janv. 2021	Mai 2021	146,000 jours	60,00000 EUR/jan	8%	24,00
Prime mensuelle	Déc. 2020	Déc. 2020	5,000 jours	40,00000 EUR/jan	8%	6,82
						<b>1 570,10</b>

## Lighting 1

For each type of light in your company, please list the number and power in Watts (brand and model), the type of regulation. This information can be found on the light itself or on the packaging if you have any spares.

In the "Regulation" box, enter the letter corresponding to the following types of operation:

**M** : **Manual** control by switch

**S**: Automatic control using **schedule** programme

**P**: Automatic control by **presence/movement** detection

**L**: Automatic control by **natural light** detection

**O**: Other (specify)

**X**: I don't know



### Fluorescent tubes/LEDs

Quantity	Power (W)/Model	Regulation (M, S, P, L, O, X)	Typical schedule



### Compact fluorescent bulbs/LEDs

Quantity	Power (W)/Model	Regulation (M, S, P, L, O, X)	Typical schedule



## Lighting 2

For each type of light in your company, please list the quantity of items and power in Watts (brand and model), the type of regulation. This information can be found on the light itself or on the packaging if you have any spares.

In the "Regulation" box, enter the letter corresponding to the following types of operation:

**M** : **Manual** control by switch

**S**: Automatic control using **schedule** programme

**P**: Automatic control by **presence/movement** detection

**L**: Automatic control by **natural light** detection

**O**: Other (specify)

**X**: I don't know



### Halogen/incandescent

Quantity	Power (W)/Model	Regulation (M, S, P, L, O, X)	Typical schedule



### Outdoor lighting/parking area

Quantity	Power (W)/Model	Regulation (M, S, P, L, O, X)	Typical schedule

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## Heating

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What systems are used to heat your premises?

I don't know

Boiler/direct fired plant

Wood/pellet stove

Heat pump

Heat network substation

Cogeneration (CHP)

Other:

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Please provide the following data for each system, if known.

Year of installation	Power (gas, oil, diesel, electricity, wood, etc.)	Heat output (kW)

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How is the heat distributed throughout the premises?

Radiators

Floor/ceiling panels

Fan

Ventilation system

Heating or infrared units powered directly by electricity

Heaters

Other:

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How is the heating system regulated?

I don't know

Centralised management via computer programme

Schedule programme →

Operating hours:

Several thermostats in different zones

One thermostat

Manual on/off switch without further regulation

Other:

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## Domestic hot water

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How is domestic hot water produced? Please tick and fill in the data for each system.

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No system (no hot water in the company)

Same as for heating → go to the next question “Is there a buffer tank”

Independent system → indicate which one below

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Centralised electric water heater

I don't know

Several electric water heaters in the bathrooms

Boiler/direct fired plant

Stove

Heat pump

Heat network substation

Cogeneration (CHP)

Other:

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Is there a buffer tank?

No

Yes, with a capacity (litres) of:

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Is there a solar hot water system?

No

Yes, with a surface area of:

m<sup>2</sup> of panels

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Where is the hot water used?

Employee sanitary facilities (hand basins)

Employee sanitary facilities (showers)

Customer sanitary facilities (hand basins)

Customer sanitary facilities (showers/baths)

Professional laundry

Professional kitchen

Swimming pool

Other:

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## Air-conditioning

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What systems are dedicated to air-conditioning your company premises?

- I don't know
- Split system (indoor unit + outdoor unit)
- Direct condensing machine (outdoor unit only)
- Indirect condensing machine + cooling tower
- Hot water absorption machine
- No air-conditioning

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Please provide the following data for each system, if known.

Year of installation	Type of refrigerant (NH3, R134a, R410A, R1234ze, etc.)	Cooling output (kW)

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How are your premises air-conditioned?

- Ventilation system
- Ceiling panels
- Fan convectors
- Indoor unit (split)
- Other:

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How is the air-conditioning system regulated?

- I don't know
- Centralised management via computer programme
- Schedule programme →
- Operating hours:
- Several thermostats in different zones
- One thermostat
- Manual on/off switch without further regulation

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Are there cooling/refrigeration systems at your company?

- I don't know
- No
- Yes, connected to the same network as the air-conditioning systems: ↴
- Yes, with independent systems: ↴
  - IT systems/UPS
  - Cold rooms, refrigerated units (kitchen/restaurant)
- Other:

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## Air-conditioning

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Is your company mechanically ventilated in whole or in part?

I don't know

No, not at all

Yes (mechanical extraction from sanitary facilities)

Yes (extraction hoods in professional kitchens)

Yes (air handling unit with supply and return air outlets in several areas)

Other:

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Please indicate the processes associated with the ventilation air:

I don't know

Heating

Cooling (air-conditioning)/dehumidification

Humidification

Heat recovery

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What is the total nominal flow rate of your mechanical ventilation systems?

m<sup>3</sup>/h

I don't know

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How is the ventilation system regulated?

I don't know

Centralised management via computer programme

Schedule programme →

Operating hours:

Presence detector

Manual on/off switch without further regulation

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## Other systems

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Please provide the data of other types of installations in your company.

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IT

Office automation (computers, printers, copiers, etc.) → Number:

Central server (small IT area)

Data centre with UPS/USV and dedicated cooling

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Photovoltaic system

No

Yes →

Panel surface area:

m<sup>2</sup>

Output:

kWc

Location:

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Compressed air

I don't know

No

Yes →

Network pressure (bar):

Number of compressors:

Year of installation:

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Professional kitchen

No

Yes →

Number of meals per day:

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Please indicate below other main systems or equipment that are not listed elsewhere in the questionnaire (e.g. machinery specific to your activity).

Type :

Number:

Output:

Operating hours: