

# Training Module 1 – How to read an energy invoice

## EnergyEfficiency4SMEs Project

Reference: LIFE21-CET-AUDITS-EnergyEfficiency4SME/101076459

### Date, Location



Co-funded by  
the European Union

# ENERGY EFFICIENCY 4SMEs

## A European Project

- **European Program: LIFE**
- **Length** : 36 months ( Nov 2022 - Oct 2025)
- **Total Budget** : 1,84 M€
- **Consortium** : 23 partners from 10 different countries
- **Coordinator** : Eurochambres
- **Structure of the project:** 8 WP
- **Targets** : SMEs from 3 sectors:
  - Hospitality and restaurants (NACE codes I 55 to I 56.3.0)
  - Agri-food Industry (NACE codes C10 to C11.0.7 )
  - Metals Industry (NACE codes C24 to C25.9.9)



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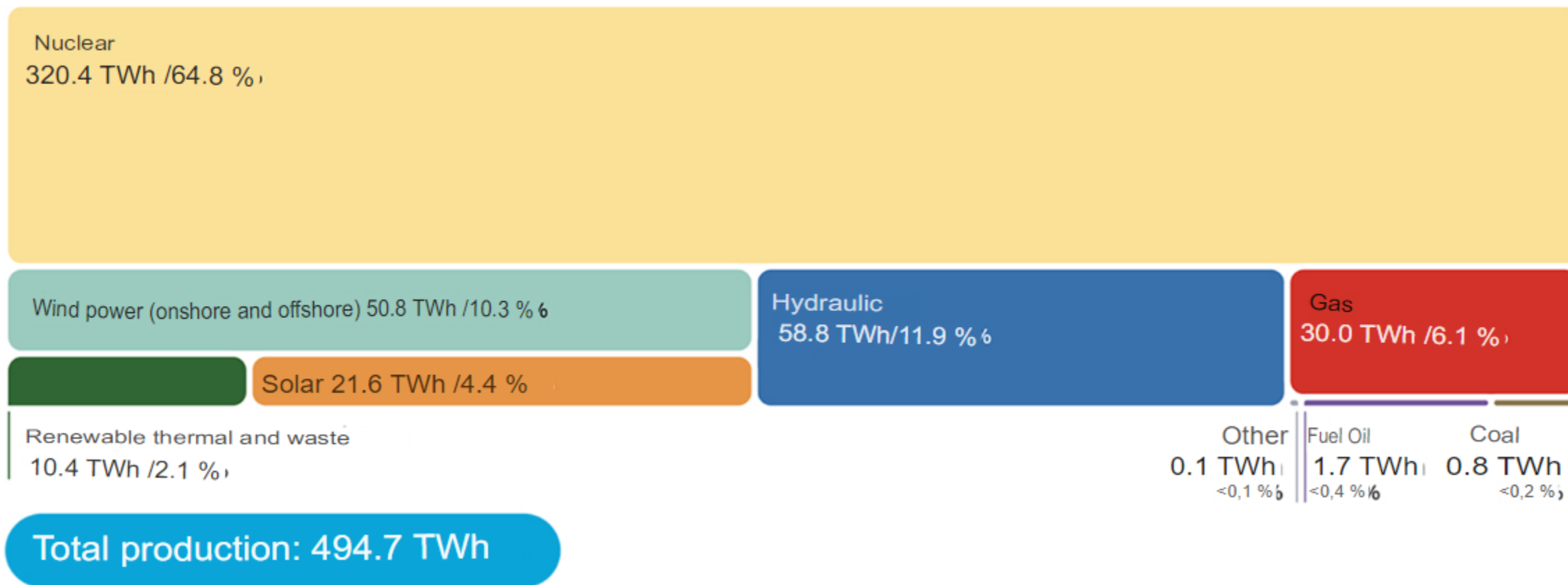
# INTRODUCTION



MEs

## The different sources of energy

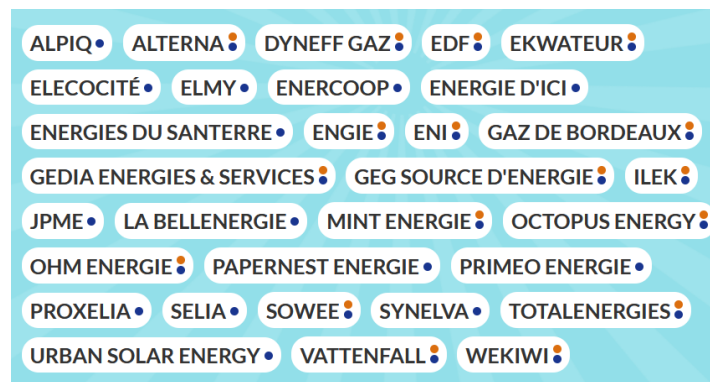
Total electricity production in France in 2023 and distribution by sector





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## There are several energy suppliers in France



*List of national suppliers as of 18 April 2024*

Each supplier has its own way of presenting its bill.

Legislation imposes mandatory information on energy bills.

Please note: the energy supplier is obliged to produce a bill free of charge at least once a year. If you choose to pay on a monthly basis, a schedule must be provided once a year, along with a regularization bill.

Invoice in paper or digital format



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## **Mandatory information on energy bills**

- **Supplier information**
- **Customer information**
- **Contract, tariffs and consumption**
- **Annual consumption reports (at least once a year)**
- **Energy delivery and taxes**
- **Billing method**
- **Source of energy (renewable energy, energy mix, etc.)**

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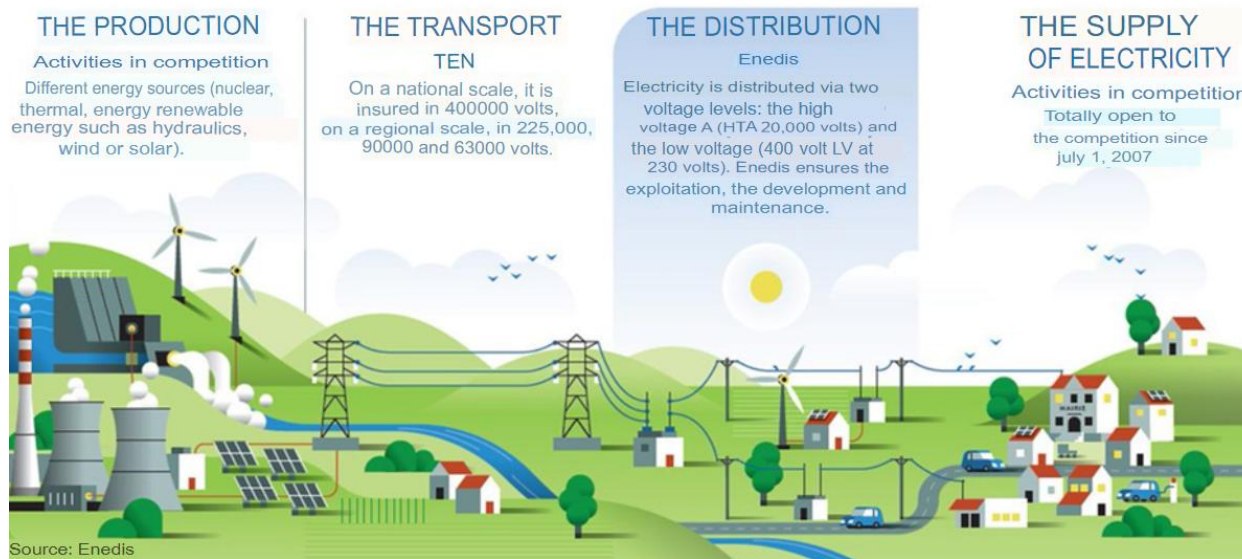
# ELECTRICITY





# Electricity

## The different components of the bill :



## Breakdown of bill :



Negotiable

Non-negotiable but optimisable

Supply

Returns to the supplier and helps to cover its supply and commercial costs

Tariff for use of the electricity distribution network (TURPE), paid to network operators

Transport and Distribution

Taxes

CTA,  
Excise duty on electricity,  
VAT

## Electricity

**Segmentation of electricity supply contracts = classification based on customer consumption, meter type and wattage**

| Rates                      | Blue                            | <del>Yellow</del>                          | <del>Green</del>                  |                              |                              |
|----------------------------|---------------------------------|--|-----------------------------------|------------------------------|------------------------------|
|                            | C5                              | C4   | C3                                | C2                           | C1                           |
| DomVoltage and power range | Low Voltage<br>PS $\leq$ 36 kVA | High Voltage<br>37 kVA $\leq$ PS < 250 kVA | High Voltage<br>PS $\leq$ 250 kVA | High Voltage<br>PS > 250 kVA | High Voltage<br>PS > 250 kVA |

### ➤ Special features of C5 meters

This meter is intended for private individuals and small businesses. No power is allowed to be exceeded, and in the event of over-consumption, the meter disconnects.

There are 2 options:

- Base option: the price per kWh is always the same
- Peak/off-peak option: the price per kWh is lower for 8 hours a day.
- This option is interesting if certain electrical equipment can be used during off-peak hours.





- For Low Voltage (LV) meters with a power rating greater than 36 kVA
  - Time-of-use tariffs
  - Electricity prices vary according to the day of the year and the time of day:
    - Winter Peak Hours (HPH)
    - Winter off-peak (HCH)
    - Peak Summer Hours (HPE)
    - Summer off-peak hours (HCE)
    - Peak hours (P)

TURPE tariff versions (Tariff for Use of the Public Electricity Network) Hours of use affect the price of kWh

$$\text{Calculation of hours of use: } H = \frac{\text{Annual consumption}}{\text{Power demand}}$$

Si  $H < 2000$  h ➡ Short-term use

Si  $H > 2000$  h ➡ Long-term use

➤ For High Voltage (HV) meters

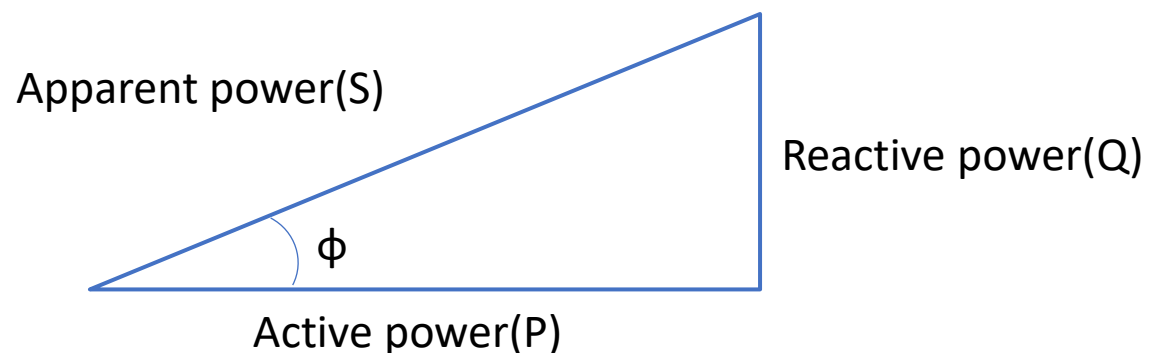
These meters require the installation and use of a transformer substation

For the C2 meter, billing is based on remote readings taken every 10 minutes, whereas for the C3 meter, monthly index readings are taken.

- Reactive energy

Electrical energy is distributed in the form of alternating current via distribution networks. It is made up of 2 types of energy:

- active energy (kWh) is the power transformed into movement or heat
- - reactive energy (kVARh) is the power used by electrical equipment consisting of magnetic circuits (motors, transformers, etc.).



If  $\tan \phi > 0,4$  ➡ the manager bills for this energy from November to March

## The load curve

A graphical representation of the meter's electricity consumption over a specific period.



Power  
demand

Consumption  
stub

# NATURAL GAS





# Natural gas

## The different components of the bill



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Distribution of the invoice :



Returns to the supplier and allows you to cover your costs supply chain and its commercial expenses



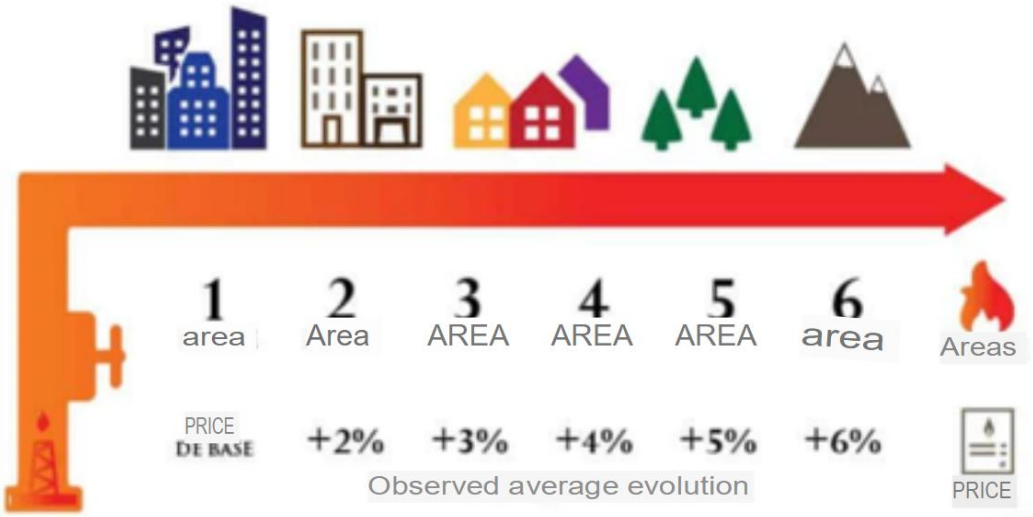
CTA, TICGN, VAT

Network usage tariff gas distribution, is up to the managers of the network



| Tariff option | Uses   | Consumption range   |
|---------------|--|---|
| T1            | Cooking, hot water   | < 6 MWh/year  |
| T2            | Individual heating, small boiler rooms   | Between 6 and 300 MWh/year  |
| T3            | Large boiler rooms, small tertiary   | Between 300 and 5000 MWh/year   |
| T4            | Industrial and large tertiary  | > 5 GWh/year  |
| TP            | Industrials and large tertiary sectors eligible for a direct connection to the transport network | > 5 GWh/year + eligibility for a connection direct to the transport network |

THE TARIFF ZONES





# Natural gas



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**Annual Reference Consumption (CAR):** Estimated gas consumption for a meter over 1 year, based on consumption in the previous year.

## Consumption profiles

There are nine consumption profiles, ranging from P011 to P019. These profiles vary according to consumption during the winter. Every gas consumption site in France can be categorised in this way.

| P011 | BECAUSE < 6000 kWh and changes every semester                           |
|------|---|
| P012 | CAR > 6000 kWh and changes every semester                               |
| P013 | The winter share is less than or equal to 39% of annual consumption     |
| P014 | The winter share is less than or equal to 50% of the annual consumption |
| P015 | The winter share is less than or equal to 58% of annual consumption     |
| P016 | The winter share is less than or equal to 69% of annual consumption     |
| P017 | The winter share is less than or equal to 75% of annual consumption     |
| P018 | The winter share represents up to 81% of annual consumption             |
| P019 | The winter share represents more than 81% of annual consumption         |



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# Thank you for your attention!