

INTRODUCTION

In 2019, world total electricity final consumption reached 22 848 TWh, up 1.7% from 2018. In 2019, OECD total electricity final consumption was 9 672 TWh, 1.1% lower than in 2018, while final electricity consumption in non-OECD countries was 13 176 TWh, an increase of 3.8% from 2018.

Much of the growth in OECD electricity consumption since 1974 has taken place in the residential sector, and in the commercial and public services sector. By contrast, industry's share of consumption has been in long-term decline with the result that as of 2019, these three sectors have a roughly equal share of consumption. The remaining consumption sectors – transport, agriculture and fishing – are relatively small consumers of electricity. However, road transport has recently experienced strong growth as electric vehicles gain market share across OECD -countries, in particular in Europe.

The four largest non-OECD consumers of electricity in 2019 were China, India, the Russian Federation and Brazil, which together represent 39.8% of global consumption. Among these countries, China has the largest share, accounting for almost half (49.5%) of nonOECD consumption.

Outside of the OECD, electricity use is dominated by industry, which represents half of final electricity consumption.

OVERVIEW

What does Energy Consumption mean ?

- You might have read our [energy productivity glossary of terms](#) article where you can find a dictionary of basic concepts that will appeal to even the most advanced energy managers. But even if you are a non-energy professional interested in energy saving and energy management, they will surely be useful!

In this article, we take a closer look at the definition of the term “**energy consumption**”.

[What does Energy Consumption mean?](#)

Energy consumption refers to ALL the energy used to perform an action, manufacture something or simply inhabit a building.

Here are a few examples:

In a **factory**, total energy consumption can be measured by looking at how much energy a production process consumes, for example, by making car parts. This will include water, electricity, gas... any energy source needed to transform the raw material into the final product

In a **household**, energy consumption includes electricity, gas, water, and any other energy used to live comfortably.

The energy consumption of **transportation** includes how much diesel or gasoline vehicles consume to run.

It is essential to understand that **energy consumption does not necessarily come from a single energy source**. Indeed, it is a common misconception to think that **to save energy you have to save electricity** whereas it could be a totally different energy source that has the greatest impact on a certain process.

Looking closely at the definition of energy consumption, it means that **the entire production process must be evaluated**. If you are part of a value-added process such as industrial metallurgy (like [TACSA](#), for instance) the process does not end when the final product is manufactured. Indeed, if your shipping fleet brings them to the customer, the fuel for this delivery fleet is also part of your energy consumption.

How much does My Energy Consumption Cost?

Given the above information, figuring out the answer to this question is easy. In **economic terms**, your energy consumption is the sum total of your energy bills.

Calculating energy consumption helps to come up with two very interesting figures if you plan to save energy:

Knowing **how much you would have to invest** in an [energy management system](#) that would help you achieve **continuously, verified savings**.

Understanding the **savings potential** of the building you live or work in, and understanding **where** to begin saving.

Regarding the first point, we recommend that you use our **free-to-download Excel template** to [create your own energy efficiency budget](#): formulas are built-in to help you automatically calculate the estimated investment and ROI for your energy efficiency project.

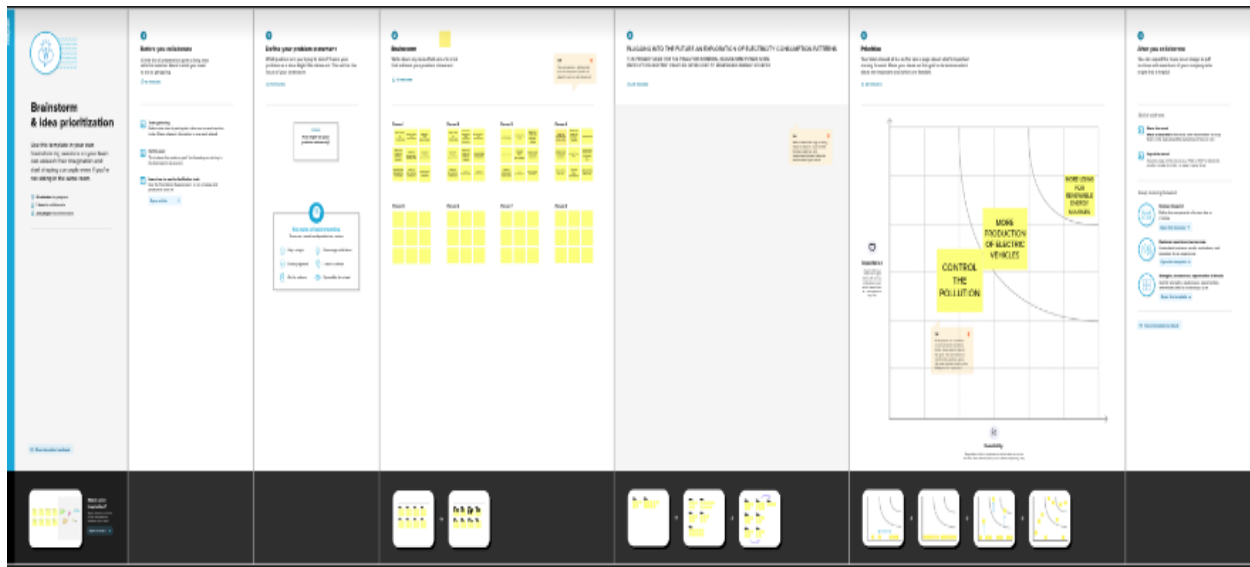
For the second, we invite you to [contact us directly](#). Our online EMS platform is connected to your energy providers and automatically shows your **energy savings potential** and gives you **personalised recommendations** on where to start saving energy. You can also **access the free demo** by clicking on the picture below.

PURPOSE OF ENERGY CONSUMPTION :

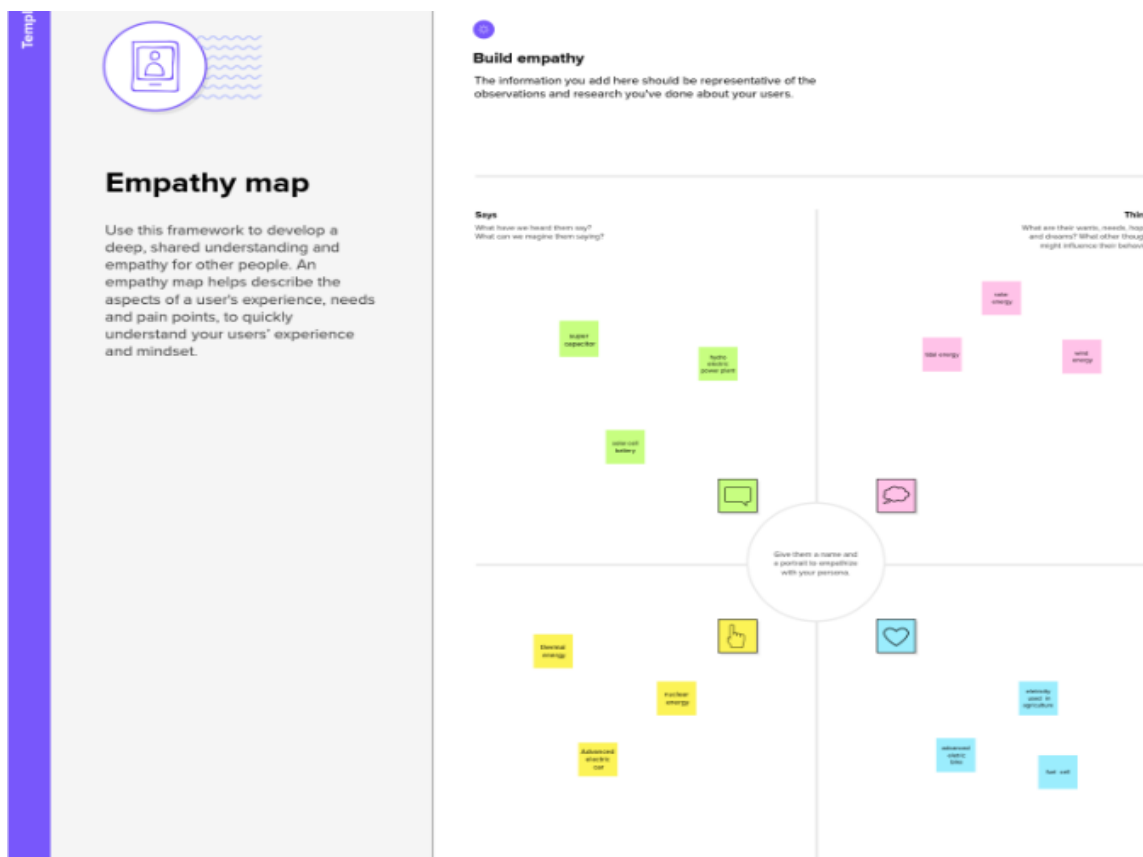
- Heating and cooling our homes, lighting office buildings, driving cars and moving freight, and manufacturing the products we rely on in our daily lives are all functions that require energy.
- Energy consumption is the total amount of energy required for a given process and is measured in kilowatt hours (kWh). This includes the use of electricity, gas, diesel, oil, and biomass.
- Reducing energy use in your home saves you money, increases our energy security, and reduces the pollution that is emitted from non-renewable sources of energy.
- Energy is so important in our daily lives because it is a basic human need. We use energy to not only heat our human-made structures but we use it to cool them as well. Energy is necessary for getting up out of bed, walking down the street, or even lifting your finger.
- The main results show that factors such as greenhouse gas emissions, gross domestic product, population and labour growth have a positive relationship with both primary and final energy consumption, which means an increase of energy consumption.
- In a household, energy consumption includes electricity, gas, water, and any other energy used to live comfortably. The energy consumption of transportation includes how much diesel or gasoline vehicles consume to run.



BRAIN STROM:



EMAPTHY MAP:



Advantages of electricity :

- It is a clean, safe, cheap and convenient source of energy
- Lower maintenance cost
- More efficient
- No tailpipe emission
- We all know that it can be set up in many sizes
- It doesn't require as many employees
- Reduces greenhouse emission
- Makes barely any pollution compare to other ways of creating or generating electricity
- Relatively low maintenance cost
- Hydroelectric station are inexpensive to operate
- Hydroelectricity produces no gas emissions or waste
- A station can operate and run for long periods of time
- It is renewable

Disadvantages of electricity :

- More expensive than gasoline
- Loss of fish species
- Sometimes messes up wildlife
- Dependent on precipitation
- More power plants and more pollution
- Damming can cause loss of land suitable for agriculture as well as recreation
- Cost for construction
- Change in river or stream quality
- An electric vehicle is not completely emission free
- In electricity, there are a limited number of feasible sites for a large number of dams
- Drought can affect power production
- Hydroelectric natural seasonal changes in river and ecosystems can be destroyed.

CONCLUSION

Energy plays a crucial role in modern societies. It has a vital input to all sectors (e.g. residential, transportation, and manufacture) and is essential to generate electricity. In other words, all societies require energy services to meet basic human needs such as lighting, heating, and mobility.

Energy is a very important natural resources. It should be saved because it's not at all free. Energy conservation is the effort made by us to reduce the consumption of energy by using less of an energy service or using renewable energy. This can be achieved either by using energy more efficiently or by reducing the amount of service used or using renewable energy.