

Climate Crisis and Energy Transition

How to help Europe in the transition from coal to clean energy

Climate change is now a scientifically recognized emergency and, therefore, a political priority. If states in the world do not take measures to limit the emission of greenhouse gases, global warming could exceed the 1.5-degree threshold already in 2030, in just ten years. It can also be seen from the reduction in the extent of glaciers all the way, see North Pole, Italy, Iceland, Peru, where the mountains of seven colors or RAINBOW were discovered, because of the beautiful colors of the mountains discovered thanks to the disappearance of the ice in that vast and high place in Peru. This increase in temperatures is the most serious scenario outlined by the UN-IPCC report "Global warming at 1.5 degrees", prepared in Incheon in Korea and released in October 2018. To face this emergency, the European and transnational agenda in 2015 it adopted the Paris Agreements and new sustainable development objectives, defining a series of actions aimed at limiting global warming by 2030. Climate actions range from energy consumption to food policies, from the exploitation of water resources to reduce the use of soils, proposing a varied package of solutions. However, almost five years after their adoption, we can say that these objectives are far from being implemented overall. The last few months have seen millions of Europeans take to the streets in the form of a protest against climate change, with gathering phenomena organized simultaneously in various countries of the world, such as the now well-known Fridays for Future and the Extinction Rebellion movement. In Italy, the instability of the political system and the evident volatility of the electoral consensus reduce the ability of political forces to develop solutions that look to a long-term horizon, as climate policies would inevitably require. For these reasons, an Assembly of Citizens called to identify priorities for intervention and forms of balance between interests, would have the strength to overcome the impasse. The examples of Citizen Assemblies on this issue are multiplying on the international scene. From Ireland to Great Britain, from Spain to Belgium to neighboring France, where on April 26 2019 President Macron announced the creation of the City Climate Convention; a temporary and independent body composed of 150 citizens drawn at national level, who between October 2019 and January 2020, for a total of seventeen meetings divided into six weekends, met in Paris to listen to experts, debate and present bills on various issues related to how to reduce greenhouse gas emissions by 40% by 2030 - energy savings, thermal renovation of housing, agriculture, mobility, ecological taxation and any other topics they deem appropriate. It is especially young people, see the Greta Thunberg movement, who can inspire us and guide us towards an energetic liberation. The world will end up in their hands in the future, and we cannot deprive them of the good of the Earth, of trees, of animals, of living in a "livable" world, we cannot leave them the ashes of a world that we have exploited. All young people are our children, they are our future, and we have a duty to leave them a usable and livable world.

Europe should facilitate the creation of City Assemblies, for the formulation of regulations to govern climate emergencies and in favor of environmental protection and manage an energy transition towards less polluting and more sustainable energy systems in favor of the environment and terrestrial

ecosystem (see as an example: Wind, Solar, Hydrogen Boilers, storage batteries and others that we will see later).

Why Citizen Assemblies? What do citizens have more?

Citizens have the advantage of knowing what they need, of seeing the problems they touch firsthand, and understanding the possible solutions. Together with experts in the sector, they can, together, find solutions that only experts do not always see, in addition to the fact that citizens' proposals are then better accepted by the rest of the citizens.

Young people can help us understand what they want for their future, by showing us how they live the present and decide on the future. Our past is different from their present and their vision of the future based on the lived history, from the lived experience. Their past does not exist, only our past exists, and what we will leave behind, given what we are currently doing and destroying or exploiting, often and too much to tell the truth.

INCENTIVES

they can help Europe to ferry towards the use of alternative and non-polluting energy sources.

The first thing that Europe should do is to give economic stimulation to alternative energy sources, with European state and local state incentives in the country where the European citizen lives, which can be combined for the citizen who wants to use it.

Incentives towards means of transport (cars, bikes, motorcycles, boats, ships), towards homes for energy and heat sources. Towards factories that innovate towards alternative energy sources to coal.

The long-term incentive helps the citizen towards the transition to clean energy, especially for citizens with fewer environments.

Incentives for research in all fields alternative to oil or coal or sources which, however, generate CO₂ or polluted, or which significantly reduce the production of CO₂, even with the best use of METHANE GAS, at least initially, until its disuse .

Incentives for the search for waste disposal to generate batteries, for the production of alternative lithium batteries and for the disposal and reuse of lithium, since it is a NON-inexhaustible source and found only in some areas of the plant.

SOLAR PANELS

Solar panels can be used to produce Electricity or Heat, heating water, so you don't have to use energy to heat it, see electricity or fire (mainly coal, but also GAS) which produces CO₂, and electricity that can be used immediately, selling it to a manager or other neighbors who need it immediately, or by storing it in accumulators, see batteries, to be used when you need it, to prepare food, instead of using gas, or to heat the apartment or fill the car battery or other electric means of transport owned.

In Malta, in every single home, it is mandatory, by law, to have panels to heat sanitary water, first of all.

Solar panels need maintenance, true, but they can last up to 25 years.

There are new technologies for the production of solar panels and new circuit technologies that allow to control the solar panels, so that a series of panels continues to produce even if in the shade part of it or some panels of the supply chain.

There are solar panels that are similar to the roof tiles, see the Tesla tiles for example, among the best known, and other manufacturers, so they can be used on roofs, or at swimming pool or road edges, wherever there is need a tile or exposed brick, see also slate for roofs or flooring.

Some solar panels have the possibility to generate energy also from the opposite side, the one less exposed to the sun, produces up to 25% of energy, while the side exposed to the sun up to 75%. Then, recently, a bug was discovered in the production of the panels, which now, resolved, allows solar panels to produce 5 to 10% more energy than the previous ones.

Certainly we must also think about the disposal and replacement of old panels. Research should be encouraged for the production and disposal of solar panels. Another way to use the sun is to produce solar thermal power plants, such as those designed by the nobel prize Rubbia Carlo, with the Solar Thermodynamic, already exploited by Egypt and Spain.

These are just a few non-exhaustive examples of the use of solar panels and infinite solar energy at zero cost.

In some countries, technologies for road surfaces that act as a solar panel are being tested, so the road itself becomes a solar panel. First we started with cycle paths, then roads where even large vehicles such as TIR pass.

Or solar panels on the sides of the road and highways or on road protections along the roadways. Lampposts with solar panels, traffic lights, light signals, Ships can also run on electricity, Norway is implementing a plan to have only electric ships by the end of 2026, already now in the UNESCO-listed fjords, only zero-emission ships are allowed.

The futuristic (and electric) passenger vessel "Future of the Fjords", for example, has been awarded the 2018 Ship of the Year.

As if that wasn't enough, Norway is also building the world's first self-driving electric container ship: it's called "Yara Birkeland".

And also the ports are in transition towards the use of electricity.

HYDROGEN BOILERS

Hydrogen boilers are now a consolidated reality.

A 600 gr load can feed a 120 m2 house where 4 people live, for about 1.5 or 2 years, depending on the needs and the way of use, with a cost ranging from 500 to 700 euros per charge.

Or it can be self-produced by adding an apparatus for the self-production of hydrogen to the boiler, with a not excessive additional expense.

The Hydrogen boiler can be used to have domestic hot water, heat for the home and electricity to be used immediately or stored in batteries, to be purchased separately.

Even factories or large companies can take advantage of this technology, with much larger boilers, and make energy use more efficient. From manufacturing, to storage shed, to car and motorbike factory, and ships.

Even power plants could switch to the use of self-produced hydrogen, without high storage, to reduce the risk of explosion, with strong safety measures in storage.

There are new technologies that allowing to extract hydrogen directly from salt water, from the sea, without having to use purified water, through electrolysis, with much more resistant electrodes, the anode is covered with a layer of iron-nickel hydroxide, rich in negative charges, and lasts up to 1000 hours against the 12 hours of current systems, which thus allow less maintenance and management costs. Furthermore this method allows to conduct electricity up to 10 times more and this allows to produce hydrogen at a much faster rate.

In addition, hydrogen is an interesting option for fuel because it does not emit carbon dioxide: when it burns, in fact, it only produces water and should slow down processes related to climate change.

This method can also be used to produce oxygen, so as to allow divers and submarines to go underwater without tanks.

GEOTHERMAL

Residential geothermal has been a simple thing for many years, but still expensive for most people.

But it is a feasible method, both for individual owners and for condominiums.

At the state level, we should think more about this technology.

In Italy, for example, there is only one place, in Tuscany. Only recently, this technology is being re-evaluated and always in Tuscany, with a new binary geothermal plant, non-polluting, which will replace the flash-type, more polluting geothermal that intercepts fluids to one that intercepts heat and the fluids are returned from where they are parties.

Volcanoes can also help us create electricity, both from surface volcanoes and underwater volcanoes.

In addition to Geothermal Energy, Italy is a leader in the production of systems that generate energy from wave motion. Program that can be adapted worldwide.

BATTERY

From the classic lithium batteries, widely used for cell phones and for cars and other means of transport, but also for home or industrial storage, we move on to new technology based on Grefene, which is so talked about for its properties, to nanotechnologies, fluoride ions, zinc-air, lithium-sulfur or even electrolyte flow batteries, which do not recharge from the electrical socket but fill up again with electrolyte when they are discharged.

Fast charge and ultra fast charge.

Every day news comes out about new types of batteries, and every day we citizens are always dry-mouthed. Which of these technologies have been brought forward? Which are promising and which are not?

Only a serious research and development plan will allow us to have short-term, long-lasting and low-polluting solutions.

It should be remembered, and it must be essential, that for each new technology, a recycling plan must also be developed, if necessary.

So technological development must have two senses, creation and recycling.

Another way to get a long charge, already mentioned previously, could be to create road routes with induction charging, so while the car makes its way, it always remains in charge, so you can make long routes without having to stop obligatorily.

But also parking for electric cars with induction charging, without having to pull out electric cables to be connected to charging stations.

And these, with batteries that recharge from solar energy or from hydrogen systems, if present in the area.

WIND AND WIND with MAGNETIC LEVITATION

Wind turbines are another great support for clean energy, but the classic blades are bulky and sometimes disfigure the landscape, but only in some cases, anyway, no more than a pole for cellular or TV transmissions poses.

If each home were equipped with magnetic levitation wind turbines, which are small and helical shaped in most cases, we would have an additional energy source to add to solar panels or other sources.

You could put them on the roofs of all the houses, or even in the chimneys where the heat that would rotate the shovel in this way comes out, without wasting any bit of energy.

It could also weigh to create mini blades to put in electric cars, which generate energy when the car is moving, trying to find the best time to activate them, so as not to create the opposite effect, that of braking the car and therefore having to waste more energy to keep it moving.