



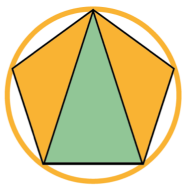
Unifying
Fields



Restoration
Power

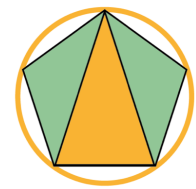
Energy Systems of the Future

White Paper



Unifying
Fields

Energy Systems of the Future



Restoration
Power



Executive Summary

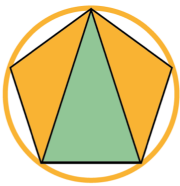
While the world has made huge efforts to transition away from fossil fuels, we see that wind and sun together remain under 2% of the total primary energy supply.

Surprisingly, an entirely new energy generation technology has been quietly in development for years in many laboratories around the world. This new technology can replace our obsolete energy infrastructure with massively powerful clean energy generation. In doing so it will address climate change and transform our global economy. This can also create a new economy; an economy which works for people and the planet.

This profound technology is fundamentally based on the forces of Nature which have powered the evolution of our Universe since the beginning of time. It is a magnificent technology, whose time has come. Our scientific and engineering teams have finally made this science visible in the laboratory and we now feel the responsibility to substantially increase the funding of the final development phase in order to accelerate the deployment of licenses into the hands of manufacturers worldwide.

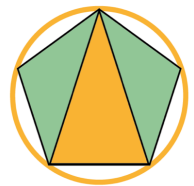
To fund the manifestation of this new technology we created a novel financial instrument: the 'Earth-Bond'. It is an interest bearing bond with a special flavour. In addition to the financial return on the 'Earth-Bond' there is another kind of return. It is the 'return of engagement'. It is an exhilarating experience to learn from-close by how the technology works, what it takes to develop it and to fully appreciate what the implementation of this technology means for the evolution of our society.

Together with our funders we are working towards creating an era in which our society uses Nature as our teacher. Funders also bring their own experience and may play a crucial role in the next stages when the technology will be implemented at scale. It is not a question of whether we will succeed. The question is when. This is a global movement which is meant to be. Having access to more funds and more expertise will accelerate the development. Experiencing the joy of being involved in its development and bringing this technology to the world is the real return.



Unifying
Fields

Energy Systems of the Future



Restoration
Power

1. Introduction

Today about 82% of all primary energy needs of the world is provided by the burning of fossil fuels. It was 85% in the year 2000. In an absolute sense we use today 25% more fossil fuels¹ compared with the year 2000.

In line with increases in the use of fossil fuels, the emissions of GHG's have risen 45% in the same period². In 2023 it is anticipated that GHG emissions amount to 38 billion tons of CO₂eq compared with 25.5 billion tons in the year 2000.

The world has seen 28 climate conferences, the first one in Geneva in 1979 and the last one (COP28) in Dubai this year. It is clear that there is little, if any, progress in reducing the use of fossil fuels, reducing GHG emissions and regulating the climate. This begs the question: *How do we create a more positive future which works for people and the planet?*

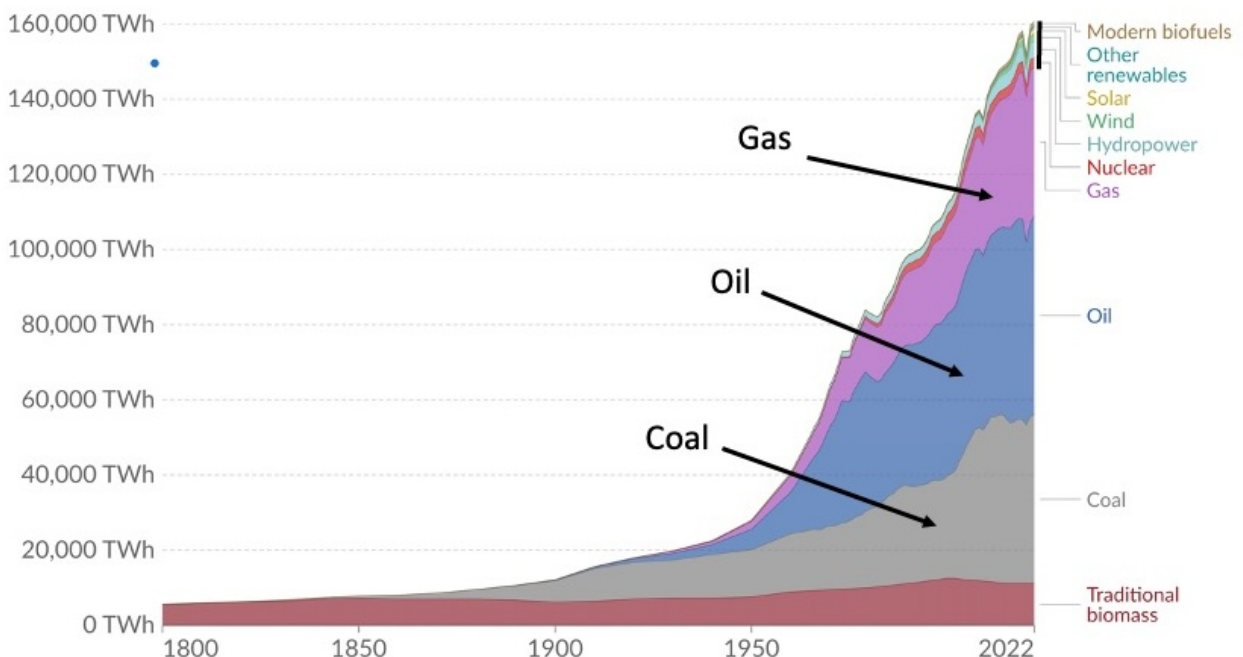
2. Energy Generation Statistics

In 2022 the world's primary energy needs amounted to 160.000 TWh. About 18% was used for the production of electricity³ (29.000 TWh).

Global direct primary energy consumption

Energy consumption is measured in terawatt-hours¹, in terms of direct primary energy². This means that fossil fuels include the energy lost due to inefficiencies in energy production.

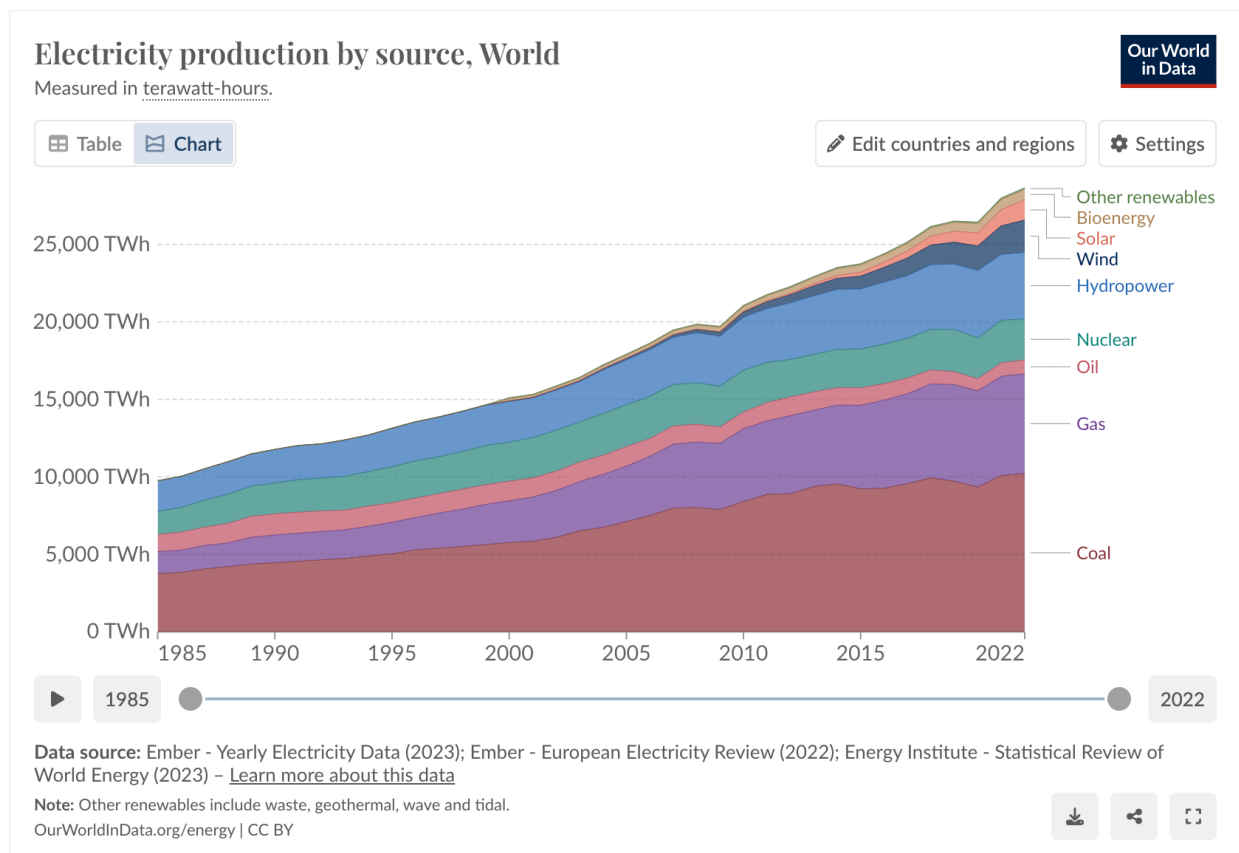
Our World
in Data



Data source: Energy Institute - Statistical Review of World Energy (2023); Smil (2017)

OurWorldInData.org/energy/ | CC BY

Wind and sun together make up just less than 1.8 % of the total primary energy supply of the world. It is obvious that wind and solar and all other existing energy generation technologies will not provide a solution to address climate change.



The policy makers came away from the Dubai Climate Conference with an ‘historic breakthrough’ about the reduction of greenhouses emissions. However the question is: how on earth are we going to do this, if we do not replace fossil fuels with a new energy generation technology which does not generate GHG’s at all?

There is another important consideration when we evaluate the benefits of an energy generation technology. Oil prices are influenced by, what financial analysts call, the supply demand balance. We saw oil prices as low as US\$ 25/bbl during the Corona crisis and as high US\$ 120/bbl during the war in the Ukraine. When prices fluctuate for whatever reason all consumers pay the price. The new technology draws energy from a source which is inexhaustible and is for free.

It is obvious: the world needs an entirely new technology which can supply heat, electricity or both at a location, on demand, has no negative side-effects on the environment and has a price that is not dependent on political or other events. It is just the cost of production of the apparatus plus a decent margin for the manufactures.

There is good news: This technology is already in development in many laboratories in the world.

3. The New Energy Generation Technology: LENRs

The founders of the Unifying Fields Foundation⁴, its subsidiary Restoration Power and its many associates around the world are amongst the leaders conducting research to bring this groundbreaking energy generation technology to the forefront.

In the last five years of our research we clearly identified the nature of this technology. It is called LENRs: 'Low Energy Nuclear Reactions'. It appears to be an outstanding and very promising technology. We started to experiment with it in our own laboratories, knowing that in many laboratories in the world similar research efforts were going on and that critical research information is shared by all science institutes shaping the birth of LENR technology.

The most stunning realisation came to us when we discovered that LENRs are natural reactions which drive the evolution of our world and, in fact, the whole Universe. For this reason LENRs are also called 'Biological Transmutations'. Biologists⁵ have documented 'Biological Transmutations' since the beginning of the 19th century. In the process of 'Biological Transmutations' chemical elements are transmuted into other elements. When this transmutation occurs excess energy is being produced.

It is estimated that the energy density of these benevolent nuclear reactions is at least about 100 times the energy density of fossil fuels⁶. Recently a new name has appeared which reflects what these reactions really represent: 'Life Enhancing Natural Reactions'. They drive the evolution of all living things since the beginning of time. This means also that LENRs are in harmony with the principle laws of Nature.

In the numerous laboratories around the world it has been found that these LENRs do not produce radioactive radiation nor radioactive byproducts.

There are many organisations today which report extensively about the progress which is being made worldwide in replicating these natural reactions in the laboratory. Good information can be found on the sites of LENR-FORUM⁷, LENR-CANR⁸, The International Conference of Cold Fusion⁹, The International Society for Condensed Matter Nuclear Science (ISCMNS)¹⁰ and LENR-NEW¹¹.□

It has been established that LENRs generate heat, electricity or both, depending on the design and purpose of the reactors. They are small and could be placed in a home, a district, a car, a lorry, a ship, an aeroplane, etc. They could be used anywhere that affordable, clean energy is needed and they generate energy on demand. Even, if high temperatures (1000-1400 degrees Celsius) are required, such as in the production chemicals, steel and cement, they can do the job.

As mentioned before, LENRs are a natural process. They are in harmony with the principle laws of Nature and it has been proven that they have no negative side-effects. It would be the first ever energy generation technology that would follow the laws of nature. This would be a decisive departure from today's technologies which all have some unintended negative side effect on our lives and our living environment.

4. The Power of LENRs

There are a great number of theories produced by quantum physicists who endeavour to explain the phenomenon of LENRs. But recently a consensus is emerging.

LENRs occur in the crystal lattice of metals. That is why LENRs are also designated as HME (Hydrogen Metal Energy). It appears that under certain circumstances Ultra Dense Hydrogen^{12,13} is formed. This is a prerequisite for the occurrence of LENRs.

Through the use of high frequency electrical pulse generators and other specific equipment Ultra Dense Hydrogen is formed. It has been calculated that Ultra Dense Hydrogen has a bond energy which is about 100 times greater than the hydrogen we find in the chemical form^{14,15}. Because of this greater bond energy fusion reactions occur.

A complimentary theory at a more fundamental level is that the accelerated expansion of the Universe is the main driving force. This discovery was made in 1998 by two independent projects, the Supernova Cosmology Project and the High-Z Supernova Search Team¹⁶.



Members of these groups have been awarded the Nobel prize for their major discovery, which shocked the science community at that time.

The accelerated expansion of the Universe is thought to have begun about 5 billion years ago. The expansion can only happen when there is a significant driving force. It is suggested by cosmologists and quantum physicists that this force not only drives the expansion of the Universe, it drives the evolution of all life.

It is concluded by scientists that it is also the driving force for 'Biological Transmutations' or LENRs.

It is how life organises itself. Ecosystems naturally evolve to higher levels of order and complexity all the time. This force includes an organising principle which lies at the foundation of an orderly evolving Universe and Nature itself.

The conclusion is that this driving force is an inherent property of all space and that it can also be applied in the laboratory to make a technology which follows the laws of Nature.

The potential of LENRs is very significant. It provides for a sustainable, affordable energy source which can be any time that energy is needed. The cost is just the equipment we need to create in order to manufacture. The basic energy source is for free, it comes from nature itself.

What we find inspiring about the LENR movement is that the science is commonly shared and that most people involved in LENR research are driven by the immense benefits they produce for the future of our civilisation. Researchers know that LENRs are for the benefit of the people and the planet and that we cannot own Nature and we cannot tax it.

5. The Way Forward

What we have made clear to the reader of this document is that this profound energy technology can power a sustainable and positively evolving future for our civilisation on planet earth. A technology which can replace all existing primary energy technologies in use today. A technology which is inspired by nature.

For the development of this technology we have received initial funding from the EU in a collective of research institutes in Europe^{17,18}, covering a period of 4 years. This gave us the funds and the credibility.

Subsequently we were able to attract more funding from some private sources through the mechanism of the 'Earth-Bond'. Because the LENR technology is a profound innovation we created a new financial instrument which reflects the spirit in which the research and manifestation of the LENR Technology is taking place.



The Earth-Bond is a normal financial bond with a 7-10 year duration on which an interest is paid, which is agreed between the parties. The interest is paid at the end of the duration of the Earth-Bond.

Moreover, it symbolises our innate Bond with the Earth. It is the beginning of a new time, an era in which technology is based on the principles of Nature. It also signals a new time in which our society lives in harmony with Nature.

We will no longer master Nature. Instead Nature is our teacher. It will create a new regenerative economy, an economy which works for the people and the planet.

It is our mission that this technology comes to the benefit of all people equally. We intend to provide licenses to our industrial partners, some of which already know that this development is going on. The underlying value of the Earth-Bond is represented by the value of the revenues we create in the form of license fees.

Viewing the enormous potential of this technology and the urgency we see to address the significant challenges in the coming times we seek further funding.

We need to accelerate the development. It is in the interest of all people and our beautiful planet. Consider lending us a hand. The planet will love you for it. And of course It is also about the future of our children and grandchildren.

6. Summary of Benefits of the LENR Technology

Here we briefly summarise the benefits of the LENR technology:

- It is based on harnessing the most basic forces of Nature and will have no negative side-effects on our living environment
- The stand-alone reactors will generate electricity, heat or both on-demand anywhere in the world
- There is no electricity network required. If it is available there is no need to expand the capacity because all energy is generated locally. It would avoid having to spend a lot of money to increase capacity of the world's electricity grids.
- The Zero Point Field (ZPF) or the quantum field is the source of the energy. It is for free and cannot be taxed. It is just the one time cost of the reactors.
- LENR reactors do not produce any harmful radiation nor radioactive byproducts
- Since the source of energy is for free there will be no more energy crisis due to the global political events
- The technology will provide self sufficiency for everyone. It is an off-grid solution. If there is a grid people who have access to the technology could provide electricity to the grid to balance it. It is the opposite of solar and wind energy which are an important cause the source of grid congestion.
- It will provide electricity to the 775 million people in the world who have no access to electricity at this time

We would greatly appreciate it if funders step forward in our effort to manifest the technology as soon as possible. The greatest return is the evolution of our society to its next stage. Those who feel called are welcome to join us in powering the planet for good.

The Founders of Unifying Fields and Restoration Power, Baarn, Christmas, 2023

References

1. <https://ourworldindata.org/grapher/global-primary-energy>
2. <https://www.statista.com/statistics/264699/worldwide-co2-emissions/#:~:text=CO%E2%82%82%20emissions%20began%20to%20rise,reached%20record%20levels%20in%202023>
3. <https://ourworldindata.org/electricity-mix>
4. <https://unifyingfields.org/>
5. https://www.researchgate.net/publication/285702581_Biological_transmutations_historical_perspective
6. https://www.researchgate.net/publication/350432016_Production_of_ultra-dense_hydrogen_H0_A_novel_nuclear_fuel
7. <https://www.lenr-forum.com/home/>
8. <https://lenr-canr.org/>
9. <https://www.iccf24.org/about>
10. <https://www.iscmns.org/>
11. <https://lenr-news.com/>
12. https://www.researchgate.net/publication/336319923_Electron_Structure_Ultra-Dense_Hydrogen_and_Low_Energy_Nuclear_Reactions
13. <https://www.sciencedirect.com/science/article/pii/S0360319921008144>
14. https://www.researchgate.net/publication/350432016_Production_of_ultra-dense_hydrogen_H0_A_novel_nuclear_fuel
15. https://ruj.uj.edu.pl/xmlui/bitstream/handle/item/278484/holmlid_kotarba_stelmachowski_production_of_ultra-dense_hydrogen_2021.pdf?sequence=1&isAllowed=y
16. https://en.wikipedia.org/wiki/Accelerating_expansion_of_the_universe
17. <https://www.cleanhme.eu/>
18. <https://cordis.europa.eu/project/id/951974>