

**Professor Gabriel Timar**  
**Global Warming:**  
**The Truth**

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## **Introduction**

I have often heard highly placed individuals and political groups saying that there is no global warming, or if there is, a few degrees of heat rise make no difference at all.

**This is fatal error number one.**

To put it mildly, the management of global warming is disastrous. Most politicians and some misguided scientists suggest that if we reduce the emission of certain gases, we will proportionally slow down (or stop) the rate of global warming.

**This is fatal error number two.**

I believe someone must tell the truth. By the process of elimination, I am elected to do it.

Being 90 years of age, I don't think I will be around to check the accuracy of my predictions. However, if I tell the truth, I will die knowing that I did what a conscientious professional must do.

Prof. Gabriel Timar  
June 2022

Never in the history of human endeavor was that much said and so little done about an issue like global warming. - *Paraphrasing Sir Winston Churchill*

## 1. How global warming started

From time immemorial, the Sun has heated the Earth's surface. When the Sun sets, the surface cools and the heat rises, breaking through all gaseous barriers in the atmosphere, disappearing into space.

With industrialization, we started emitting certain gases in larger quantities (carbon dioxide, methane etc.) now called: **greenhouse gases**.

They began strengthening the weak, existing gaseous heat barrier in the upper atmosphere.

By the mid-nineteen-hundreds, the barrier thickened, and like the glass walls of a greenhouse, surrounded our planet. The heat driven by the Sun's energy entered easily. However, the rising return-heat (after sunset) does not have enough energy driving it, and cannot break out, keeping it stuck in the atmosphere, raising the temperature of the air. **Global warming had begun.**

Due to the space inside the greenhouse barrier, and the volume of water in the oceans, it took several years before we realized that the average global temperature was rising.

## 2. The impact of global warming

A one-degree rise in the planet's *annual average temperature* is not distributed by daily one-degree rise, but the 365 degrees go into several short periods of extreme heat waves. During these times, the surface waters evaporate faster, leading to occasional heavy precipitation. As the amount of water in the hydrologic cycle is constant, the heavy rains are followed by long droughts.

At present, global warming is between 1.7 and 2.0 Celsius degrees. The average temperature of the water in the oceans also rose at the same rate. The impact of global warming is clearly manifest.

The polar ice-cap(s) are slowly melting; sea levels are rising. Two countries set on coral islands, *Kiribati* and *Tuvalu*, will substantially disappear in the near future.

The climate is already changing. As the rainfall distribution is becoming erratic, floods and droughts are frequent, resulting in crop failures.

The above climatic changes promote desertification (fertile land slowly, **but irrevocably**, turning into desert).

Periodic low water levels appear in major rivers. Marine traffic will be interrupted often. Water shortage will occur for irrigation and perhaps municipal water supplies.

Winds in excess of 300km/hour will often occur for short (few hours) periods. Such winds hitting the highways at 90 degrees are powerful enough (equivalent to a horizontal load of half ton per square meters) to cause many deadly accidents.

The signs of these changes have already been observed in 2021 and 2022, at times reaching critical levels.

### **3. Controlling global warming**

The political establishment propagates certain solutions to global warming which are false, and rapidly move the world in the direction of an environmental catastrophe.

They suggest that the reduction of greenhouse gas emission will slow global warming.

In addition, they claim that the carbon-free status of the planet will reverse the effects.

**These are not true**, designed to placate the gullible public. If we went carbon-free immediately, the barrier would remain there, and keep trapping the heat. The warming would continue unabated.

Eventually, the barrier might break up, but how long (if at all) that would take is anyone's guess.

As long as the barrier is in place, the heat cannot leave, and the warming will continue.

The global warming effects will escalate rapidly.

The trendy declarations of reducing emissions, slowing, stopping and reversing the process, are nothing more than political slogans. I do not understand reputable scientists supporting such theories.

The Sun is radiating heat to Earth and it all stays within the greenhouse barrier.

Consider the emissions:

**Energy** — Energy generation is responsible for more than 80% of emissions

throughout the world. Burning fossil fuels produces 82% of all energy used today.

**Airlines** — 35 to 40 thousand airliners and freighters are cruising 24/7 in the atmosphere.

**Agriculture** — Several billions of cattle are pumping out methane daily at a rate of each animal being equivalent to an old Land Rover's greenhouse gas emission in six hours.

**Economic growth** — The forced growth of the economy is a major factor (total green house gas emission rose in the past at the same rate as the world's economic growth).

This way of meaningfully reducing emissions is a pipe dream.

## 4. The Future

**I do not expect the political and financial elite to take global warming seriously for the next few years. They will continue advocating the well sounding (cheap), but ineffective ways to stop the warming.**

By 2032, the temperature rise will doubtless be over three-degrees Celsius.

I assume that by this time, the number and seriousness of tragedies, clearly connected to global warming, the number of victims, and the enormous financial losses will demand action.

The political and economic elite will realize that something must be done to control global warming.

The availability of water will be the first obvious problem.

The frequent devastating floods occurring on most major rivers, followed by equally damaging long droughts, will be the likely catalyst. The established probability of these events will exceed the chance assumed to occur once in 100 years. The droughts may deny water for irrigation at the most critical times. Municipal and industrial water supplies may experience critical water shortages.

Wind velocities of more than 300 km per hour may be a regular event. Spectacular structural failure of buildings, perhaps bridges, and other installations may occur.

About 15 to 20% of prime agricultural land will likely, **irrevocably**, turn to desert.

Famines in developing countries will take many lives, because food aid water will not be available. Food production will be drastically reduced in

advanced producing countries.

Where flat, open spaces surround the highways, winds (hitting the traffic at right angles) would sweep light vehicles off the road, and likely topple large, unloaded trucks.

I hope our worthy political and industrial leaders will realize what must be done, if inhumanity were to survive.

They should realize that the only way to survive is to:

### **Remove the barrier.**

I think that will be the easy part.

Presumably, the technology to remove the barrier is already available. I fear the high cost and the considerable energy demand may prevent its rapid deployment. Once it is done, and the world does not emit greenhouse gases anymore, the prevailing climatic changes, and the damages will remain with us, but things will not get worse.

The world must become carbon-free, or the barrier removal must become a continuous (annual?) operation. Both are monumental tasks. Carbon-free world?

At the time of this writing, 82% of the world's energy is generated using oil, gas or coal.

### **What are we going to use to replace fossil fuels?**

Certain groups advocate switching every energy use to electricity, supplied by solar and/or nuclear power generation.

There are several problems with this idea:

Approximately 5% of the world's energy comes from nuclear generating stations. We have had several accidents like Three Mile Island, Chernobyl and a few others. Such accidents may have far-reaching consequences.

How often would we see accidents if nuclear power stations supplied the bulk of the world's energy demand?

I'd hate to see nuclear power stations constructed and operated in the developing world. I believe we'd face a continuous state of nuclear emergency due to accidents.

My 25 years in the developing countries have taught me a few things:

We had continuous problems trying to train, and motivate, water treatment plant operators. Despite the most appropriate (simple) facilities to assure safe water, we had several cholera outbreaks.

In my opinion, nuclear power plants built outside technically oriented and highly disciplined environments is asking for disaster.

The operation is the easier part of nuclear power generation. The hardest part is dealing with fuel, which will be in short supply. Additionally, the spent fuel must be stored safely for thousands of years.

It seems nuclear power plants are not the proper **permanent** alternative to fossil fuels.

### **How about solar energy?**

Solar power is often thought to be the most appropriate replacement.

There are a few problems with it too.

Due to its cyclical nature, energy storage is essential.

The efficiency of solar panels is about 85%; storage efficiency is between 30 to 90%. All in all, one could say that solar panel systems work at about 50% efficiency. The Sun gives us only one kilowatt per square meter energy. No matter how you cut it, that's all we get. World average energy demand is assumed at 140 KWH/person/day including domestic, commercial, and industrial demand. (China 300, USA or EU 200). It translates to 35 square meters of solar panels per person in the winter. The European Union with its 447 million people would have to have approximately 11000<sup>4</sup> square kilometers of solar panels to fill **half the current energy needs**.

There is another problem with polycrystal solar panels. Some manufacturers place the panels' lifetime between 10 and 25 years. At that time, the panels have to be replaced.

Energy storage is something similar to gigantic car batteries. Their lifetime, in my opinion, will not be much more than 10 years.

Regardless, solar panels have a role in the carbon-free future.

According to a recent EU master plan, solar panels could supply 26% of the union's needs.

That still leaves us 74% of energy that has to come from somewhere to replace the fossil fuels.

### **Wind Energy**

Many people, organizations, politicians and scientists believe that **wind turbines** are the solution.

This is questionable. It is quite difficult to construct a wind turbine that operates efficiently at wind velocities of 15 to 20 km/h and withstands 300 km per hour blasts. Besides, the vibrations caused by wind turbines have not been properly researched. We don't know what they do to living organisms.



**Hydrogen fuel** cells refilled for electric cars is already available in the U.S. at competitive prices. However, I could not find reliable information about the costs of mass-producing the fuel, the application technology, and the related energy demand.

### **Hydro power**

Doubtless this is the best alternative, but in view of the climatic changes, it might not be reliable. On account of extended droughts, heat waves (at temperatures of 40 degrees Celsius or more), may evaporate significantly. Reservoir levels may drop to critical levels and energy production may have to stop.

### **Geothermal energy seems to be the answer**

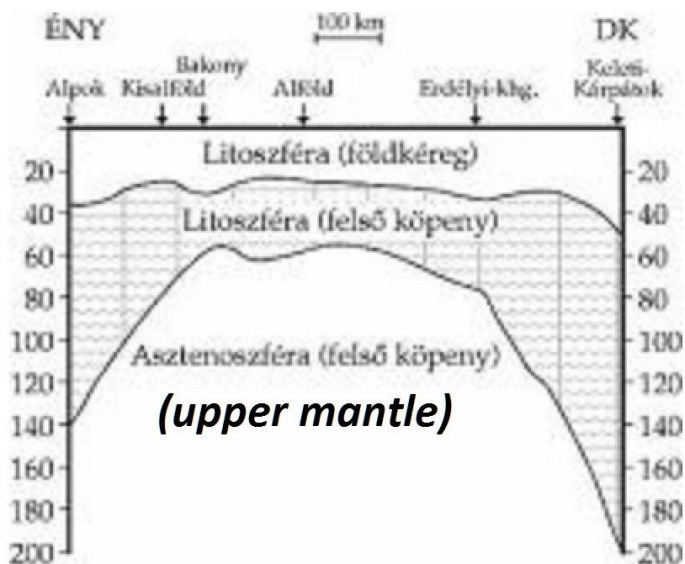
The thickness of Earth's crust differs from place to place. In Europe there are a few places where the Earth's crust is thin enough to allow the construction of large geothermal power plants.

The largest of such formations is located under Hungary, as illustrated below. This is allegedly the third largest of such formations in the entire world. The energy reserves there are enough to supply the whole of Europe with cheap and reliable electricity for many years to come.

A smaller suitable site is located in the western part of Germany and two or three are in Italy.

Incidentally, the world's oldest geothermal power plant has been operating (since 1904) in Larderello, a small community in Italy.

## Earth's crust cross-section under Hungary



Apparently, a few years ago, someone in high position (upon bad technical advice and/or poor cost/benefit analysis) declared that geothermal energy is too expensive, and shouldn't be considered at all.

However, in view of the recently created energy crisis, geothermal energy, where **the above illustrated crust formation exists**, is not only the cheapest, but also the most appropriate technology.

A survey of geothermal energy sources revealed that the United States has geothermal energy reserves (based on earth crust formations similar to the one under Hungary) enough to cover about half of the U.S.'s current energy demand.

As proof of proper engineering, 16% of energy used in California comes from geothermal sources.

In Europe, the Hungarian fields alone could supply not only the European Union, but the whole continent with electric power.

I have no detailed information of the German and Italian sites, but most likely they could be tapped and more than enough energy supplied to satisfy the continent's demands.

I do not know of geothermal energy surveys in developing countries. However, I presume that along the so-called **ring of fire** (from New Zealand to Japan), a line of volcanic activity could be a good source of geothermal energy.

Geothermal power stations, on account of simple and easy operation, seem feasible in developing countries.

**In conclusion**, I fail to understand the current panic in Europe about energy. The construction of geothermal power plants is relatively simple. At least, pilot plants should have been constructed years ago, and resources surveyed.

**I'd venture to say that no country is truly independent if its food, water, or energy supply is in any way under foreign control.**

## **5. Recommendation**

**Preamble:** Based on a simplified mathematical model, I tried to visualize the prevailing conditions in case of 5- or 6-degree global warming. These are the results:

In my opinion, global warming of 6 (six) degrees Celsius **is not survivable** without specially constructed shelters, indoor climate control, and tremendous amounts of energy.

Food production will only be possible indoors, using specially constructed temperature- and humidity-controlled environments.

Last but not least, a meteorological service operating 24/7 would be essential to **accurately** predict the location and velocity of winds and temperatures in their assigned territory.

I am convinced that the current efforts to control global warming are **totally inadequate**. If only the present efforts continue, by 2060 global warming may reach 6 degrees Celsius, the borders of Armageddon.

The only way to stop global warming:

### **The gas barrier must be removed.**

**To survive, we must URGENTLY develop and deploy the technology to remove the greenhouse-barrier.**

**To do that, the combined scientific, manufacturing and personnel resources of the USA, Russia, China and Europe are essential.**

They should set aside their differences **and place survival ahead of politics and profits.**

The urgency is supported by the following most reasonable assumption:

If the barrier is removed, global warming stops. However, the damage to our climate and environment remain with us. **We must learn to live with them.**

The cooling off—if it happens at all—may take quite a few years, because the oceans' temperatures warmed as much as the air did. Honestly, I do not see any reason why they should cool.

When we remove the barrier, the system must be kept ready to operate at

regular intervals until the emission of the greenhouse gases is completely eliminated.

We must continuously monitor the upper ranges of the atmosphere.

## **Carbon free world.**

Halting the emission of greenhouse gases is urgent. We have no idea how long would it take for the barrier to develop again. If the present, ever-growing emissions continue, we may just restart global warming.

Carbon-free status cannot be achieved painlessly. Without using fossil fuels, the present energy demands cannot be satisfied for many years to come.

**We must learn to conserve energy.** Some profitable, but energy-hungry processes or devices should be (temporarily?) replaced by manpower.

I have many recommendations, but bucking the political and financial establishment, I'd better stop here. I will be happy if the leaders read a few pages of this document. Perhaps someone may decide to do something about global warming and start the wheels rolling.



### **Meet Gabriel Timar:**

Born in Hungary in 1932, a cadet at the elite military school of Nagykaroly during World War II, Gabriel Timar studied civil engineering at the Budapest University. Taking an active part in the 1956 revolution, he decided to defect to the West. In the United Kingdom, he worked as a structural designer. Ten months later, he immigrated to Canada and worked as an engineer. After seven years, he got his first contract in Asia.

For the next twenty-odd years he worked in Africa, Asia and the South Pacific as a consulting engineer, chief executive officer, United Nations environmental engineering advisor and finally as a professor. In 1982 he married, returned to Canada and taught environmental engineering at Seneca College in Toronto. In 1994, he retired as the Chair of the School of Civil and Resources Engineering Technology. All his life he enjoyed writing novels, articles, and plays, both in English and Hungarian. From 1997 on, he regularly contributed articles to *Kanadai Magyarország*, the largest North American Hungarian language weekly under the pseudonym Gabor Bendeguz. In 2000, his first Hungarian language novel, *A Bardán kapcsolat* was nominated for the Zsoldos award, recognizing the year's best Hungarian sci-fi. In 2004, his first English language novel, *Hades Connection*, another sci-fi, was published in the USA. To date he has published seventeen novels.

Professor Timar has also written several manuals and college textbooks

published by the Province of Ontario, Seneca College, United Nations and the University of Malawi.

Gabriel is now married to Ilona and maintains a home in Budapest as well as in Mississauga, Ontario, Canada.