

Original Article

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The Market Size for Carbon Negative Replacements of Gasoline and Diesel Fuel and the Manufacture of the Carbon Negative Mixtures

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Abstract

We established in this original article that the numbers per the manufacture of the Carbon Negative fuel mixtures to replace Gasoline and Diesel fuels produced from petroleum has to be slightly larger in numbers than the actual numbers of the consumed Carbon Negative fuels to reduce substantially the air CO₂ which causes fresh water loss to the Space vacuum. The catch is that if we want to decrease the air CO₂ content we have to manufacture more Carbon Negative fuels than the amount of them consumed. We want to start from the Carbon Negative fuels manufacture at the level of \$380 billion at the market size of 2023. This number must be higher later on depending on the rate of the inflation and the growth rate of the fuel markets.

Key Words: Carbon Negative fuel Mixtures; Gasoline replacement; Diesel fuel replacement; market size \$380 billion.

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Introduction

We projected in [1] that the increase of the air CO₂ causes the loss of fresh water vapors to the outer Space vacuum in the next 10-25 years. In 2010 NASA has found that the air CO₂ has increased to 400 ppm [2]. According to NASA, the amount of carbon dioxide (CO₂) in Earth's atmosphere was about 416 parts per million (ppm) in April 2023 [3]. Local air CO₂ concentrations might exceed 450 ppm. What is the problem with the air CO₂? CO₂ is among the heaviest gases composing the air. At the average density of the air gases of around 1.22 g/m³ the air CO₂ density is near 1.97 g/m³. That means that the air CO₂ by

the Earth's gravity force spreads over the Ground and the sea / ocean surface. We are not discussing herein the air CO₂ actions on the Ground which is the natural reserve for fresh water coming from melting ice / snow / rains, etc. We herein are discussing the air CO₂ spread over Ground and over the the ocean / sea water [1].

In photographs taken from Space, we can see that our planet has more water than land [4]. It is unexpected and somewhat inconceivable that less than three percent of Earth's water is fresh water. According to the U.S. Geological Survey, most of that three percent is inaccessible. More than 68

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percent of the fresh water on Earth is found in icecaps and glaciers, and just over 30 percent is found in ground water. Only about 0.3 percent of our fresh water is found in the surface water of lakes, rivers, and swamps. Of all the water on

Earth, more than 99 percent of Earth's water is unusable by humans and many other living things. It seems extraordinary that the water that supports all terrestrial, as well as aquatic, life on our planet is actually so scarce [4] as Fig. 1 shows below..

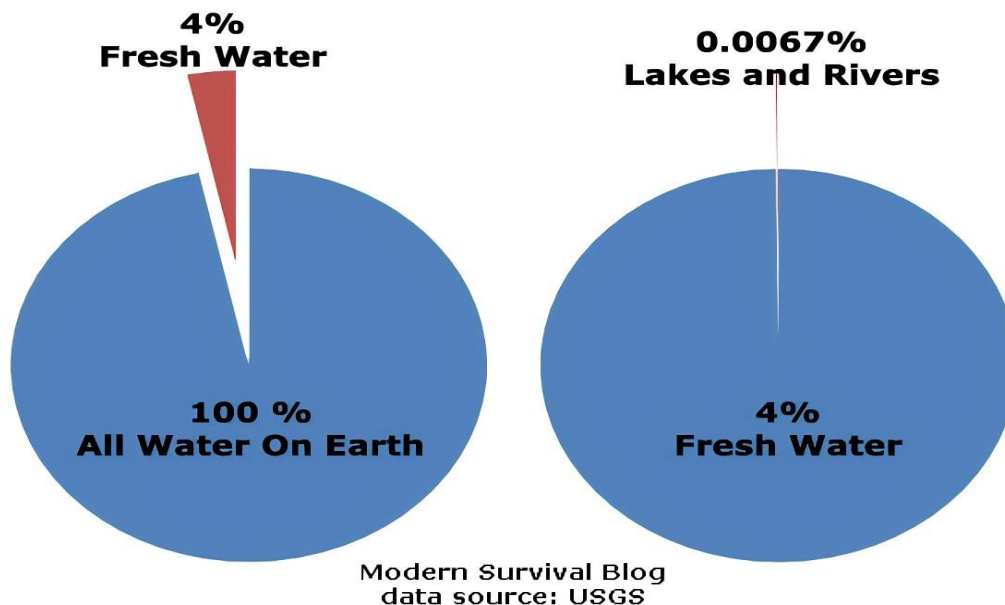
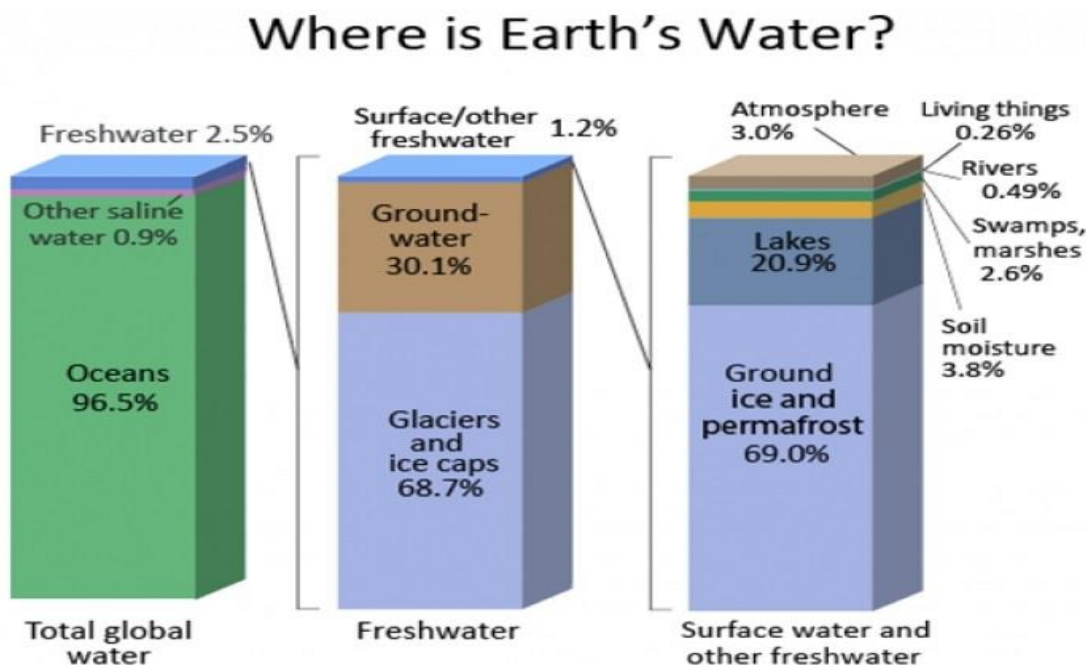


Fig.1. Fresh water reserves on Earth. The numbers are rounded and do not reflect the actual numbers of the fresh water deposits absolutely correctly [4].

The below shown Fig. 2 emphasizes our concerns which have been concerns of other scientists [5].



Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*.
NOTE: Numbers are rounded, so percent summations may not add to 100.

Fig. 2. Earth's water and fresh water reserves [1,5,68].

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The Author came to work in Houston in 1998 from Moscow, the Russian Federation twenty five years back. He was really surprised with the blue bottomless Houston sky with no any clouds around the year. Now the weather became different. This is because the closeness of the Mexican Gulf. The extra air CO₂ spreads over the water surface in the Gulf of Mexico causing the extra evaporation of the fresh water. That fresh water vapors become condensed and form clouds in the sky. The Southern wind blows clouds from the Gulf of Mexico towards Houston. Clouds now in Houston are almost daily and the rain is also almost daily. What has happened? Global warming causes Mexican Gulf to evaporate into air plenty of fresh water vapors. Said vapors are condensed into clouds and now clouds cover the Houston sky. The very similar process happens with the salty water in the Gulf of California. Air fresh water vapors are sucked by the outer Space vacuum which is on the other side of the 400 miles wide air layer covering Earth. Skeptics from the international petroleum corporations which are the only source of Gasoline (C₇-C₉) and Diesel fuel (C₁₀-C₁₅) originated from petroleum insist that there is the air layer at the altitude of 15 kilometers from the Earth surface with the temperature around - 60°C [6]. Said layer freezes the fresh water vapors and they fell down to Earth. This is a good explanation but it is not exactly correct. If the readers remember ladies drying their laundry at the pre-washer / dryer era in Europe 30-50 years back they could recall that the laundry drying during winter time in the backyards of houses at the negative Centigrade temperatures. Said ice (former fresh water) happens almost as fast as during summer time under the same conditions. Ice evaporates and the laundry dries. The very same process happens to the frozen fresh water vapors and their ice is sucked by the outer Space vacuum. If any of the readers was ever concerned about microbial cultures lyophilization for the culture storage and distribution ten they do remember how frozen fresh water in the frozen microbial cultures evaporates over the lyophilizer vacuum to the cold coils of the lyophilizer [7].

CO₂ absorbs **infrared energy** because it has a certain resonance frequency that corresponds to

the energy of the light. When infrared light hits a CO₂ molecule, it excites the molecule and causes it to vibrate. This energy is then converted into heat [8-11]. Said heat heats the Ground with trapped there fresh water as it heats the sea / ocean surface water causing substantial increase of the fresh water evaporation to the atmosphere. We already have discussed what happens to fresh water vapors in the atmosphere. The atmosphere layer is only 400 miles above Ground and touches the outer Space vacuum surrounding Earth and its satellite Moon located in the distance of 220,000 miles away from Earth.

In 2010 NASA has bombarded the Moon to investigate the chemical composition of the resulted from bombardment debris. And NASA has found plenty of ice of the Moon. NASA had questions about said ice, where did it come from to the Moon? Apparently Moon worked as the cold trap for the fresh water vapors coming from Earth [12] as we have discussed above [1].

Earth has lost plenty of fresh water to the outer Space already and this loss significantly increases now with increase of the air CO₂. **The current loss figure is equivalent ~25,920 liters per day, or 9,467 m³ per year.** And the reference of that figure seem to be the paper [13], that used measurements from the [14]. **That would correspond to a total loss over Earth's history of 42,000 km³ of water, equivalent to about 12 cm of sea level change [15].**

The Author intends to replace the international petroleum corporations by the Carbon Negative fuel corporations. Easy to say but not easy to do, though. When the Author has offered his proprietary technology of Gasoline replacement fuel Isobutanol manufacture [16] to SHELL SHELL in two days after the Author's presentation sent two Mexicans to kill the Author in the premeditated by them car crash (HPD report is available for the record). The Author survived but had global neurosurgery after said attempted murder and now suffers more then six complications. This info is important to determine the global World's market size for the manufacture of the Carbon Negative fuels. Gasoline World's market size exceeds \$126 billion **Billion by 2028, exhibiting at a growth**

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rate (CAGR) of 1.5% during 2023-2028 [17]. The Diesel fuel market size is over \$225.62 billion and is projected to grow at a compound annual growth rate (CAGR) of 3.96% from 2023 to 2030 [18].

The customers are the paramount for the Author's businesses. We try to analyse the customers by their structure: cars, ships, air plains, etc. In the US there were 282 million vehicles in 2021 [19]. At the same time In the European Union there were .242.7 million cars [20]. In Africa the amount of cars was between 26 and 34 million [21]. At the same time in Australia the amount of cars was 20.1 million. The Australian national fleet increased by 1.7% from 2020 to 2021 [22].

FlightGlobal recorded a total of 53,271 currently active aircraft, a net reduction of 292 or .6 percent from last year's directory. The United States continues to operate the world's largest military fleet of 13,246 aircraft, comprising 25 percent of the global share. Russia took second place with its fleet of 4,173 or 8 percent, with the People's Republic of China not far behind at 3,285 or 6 percent. The directory provides a detailed breakdown of quantities by aircraft type, including combat aircraft, special mission planes, combat helicopters, tankers, transport planes, and training craft. The United States comprises 19 percent of the global share of combat aircraft. China has notched second place at 11 % - a reflection of the People's Liberation Army's aggressive modernization and procurement programs - followed by Russia at 9 percent. "Despite its concern over the growing capability of so-called great power rivals Beijing and Moscow, Washington's air power dominance remains apparent," the directory concludes. "Its armed forces top all six of our directory's main aircraft usage categories, and their combined fleet strength of 13,246, or 25% of the global total, is greater than those of the next five-ranked nations combined: Russia, China, South Korea, India and Japan" [23].

Commercial air crafts: the amount of commercial air crafts around the world : projection 2019-2041 - the world's aircraft fleet is expected to increase from 25,900 to 47,080 air

crafts between 2019 and 2041 [24]. While the more established markets of Europe and the U.S. & Canada are predicted to increase by around 79 and 42 percent respectively, the Chinese fleet is expected to increase by about 145 percent to 9,630 air crafts in 2041 [25].

Commercial ships around the World: of the around 58,000 merchant ships trading internationally some 17,800 ships were Ro-Ro / general cargo ships as of January 1, 2022. Roll-on/roll-off (RORO or ro-ro) ships are cargo ships designed to carry wheeled cargo, such as cars, motorcycles, trucks, semi-trailer trucks, buses, trailers, and railroad cars, that are driven on and off the ship on their own wheels or using a platform vehicle, such as a self-propelled modular transporter. Ro-Ro / general cargo ships thus accounted for nearly 31 percent of the world merchant fleet. The growing pressure to reduce *greenhouse gas emissions in the industry* asks for manufacturers' response. With that in mind, new builds of general cargo ships are predicted to produce an average of 40 percent less carbon dioxide emissions by 2040 [26].

Carbon Negative fuels mean fuels manufactured from the air CO₂. Their combustion also generates air CO₂. The solution is to manufacture slightly more Carbon Negative fuels than the consumed amounts. That means the Author has to reach the manufacture levels of Carbon Negative fuels of \$380 billion by the market size of 2023 and this number must be higher later on depending on the inflation rate and the growth rate of the Gasoline and Diesel fuel replacements markets.

Materials and Methods

Besides the gas mix of the composition discussed before (20% (vol/vol) CO₂ and 80% (vol/vol) H₂) which we used to feed our genetically engineered biocatalysts [49-60] we have used our proprietary horizontal fermentation vessels or as we call them bioreactors [27].

The most important elements of said proprietary horizontal bioreactor are shown in the following picture (Fig. 1). Important that the gas feeding fed has to be assembled in the way to provide uninterrupted supply of the 0.5 micrometer gas mixture bubbles to the biocatalyst of it starts decaying with no gas mixture feed. We do not anticipate any

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such interruptions in the technological processes we run and have over 40 0.5 micrometer stainless steel diffusion stones in said horizontal bioreactor to provide the uninterrupted feed of our genetically engineered biocatalysts [49-60] we have made by the genetically engineering methods as described [61-63]. Per the subjected to the liquid fermentation

medium “perimeter” of said horizontal bioreactor (the medium volume is approximately 70% of the total 60 ton bioreactor volume) we have the three stainless steel diffusion stones per the perimeter of each impeller to ensure the uninterrupted gas blend feeding.

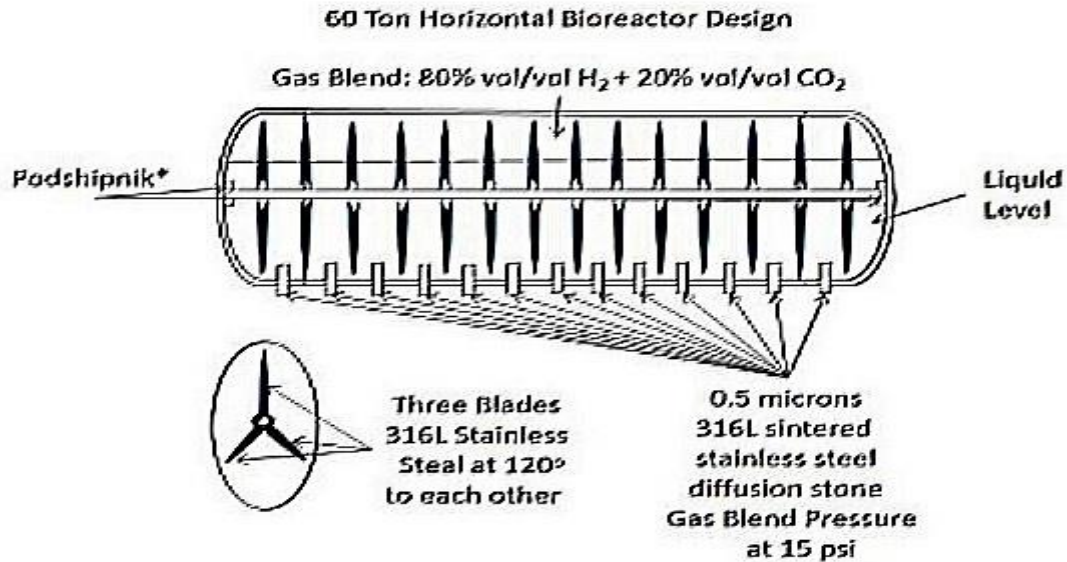


Fig. 5. Our proprietary horizontal 60 ton bioreactor [27].

The composition of the fermentation medium we use might be different for any kind of the Carbon Negative biofuel (proprietary compositions) but in

most cases we use the following liquid medium for the biocatalysts, g/l:

The liquid medium for the growth of Acetogens LM, g/L:

NaHCO ₃	3.5
KH ₂ PO ₄	2.0
NaCl	0.4
NH ₄ Cl	0.4
MgCl ₂ x 6H ₂ O	0.33
CaCl ₂ x 2 H ₂ O	0.05
Resazurin	0.001
Yeast extract	2.0
Caseine trypton	2.0
Nicotinic acid	0.025
Cyancobalamin	0.025
Para-aminobenzoic acid	0.025
Ca D-pantotenat	0.025
Thiamine x HCL	0.025
Riboflavin	0.025
Lipoic acid	0.015
Folic acid	0.0001
Biotin	0.0001
Pyridoxal - HCL	0.005

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Sodium nitrilotriacetate	0.0075
MnSO ₄ x H ₂ O	0.0025
FeSO ₄ x 7 H ₂ O	0.0005
Co(NO ₃) ₂ x 6H ₂ O	0.0005
ZnCl ₂	0.0005
NiCl ₂ x6H ₂ O	0.00025
CuSO ₄ x 5H ₂ O	0.0005
AlK(SO ₄) ₂ x12 H ₂ O	0.0005
H ₃ BO ₃	0.0005
Na ₂ MoO ₄ x 2 H ₂ O	0.0005
Distilled water to the volume of 1 Liter	

pH 6.5 adjusted by the hydrochloric acid before the autoclaving of said liquid medium at 0.55 atm for 35 min right in the 60 tons horizontal bioreactor. Imagine the volumes we are operating constantly with to get said biofuels.

As Fig. 5 shows, in our system we used 42 (14 per the length of the horizontal bioreactor, three by the “perimeter” (the 70% of the horizontal bioreactor are filled with the liquid medium), the total number of the impeller used is 42) causing random distribution of the gaseous blend over the bioreactor volume we have used. Said gas blend was composed of 80% (vol/vol) H₂ and 20% (vol/vol) of CO₂. This is very important that said CO₂ was extracted from the surrounding air. The process of said CO₂ extraction is proprietary and we will describe it in our subsequent publication since we do not have enough money for the US patenting process and trust that the publications in

the peer-reviewed Journals totally replace the related patents and the published articles have to be always overcome by the patents of competitors if any. The horizontal bioreactor shown in Fig. 5 has been filled by the nutrient medium by 70%. The rest of the bioreactor space was for the used by us gas blend as above. It is important to note that each impellers used were composed of the properly balanced for the rotation three polished stainless 316S steel blades at the speed of 450 rpm. The pressure of the gas blend used in the horizontal bioreactor shown in Fig. 5 was 15 psi. The total number of said diffusion stones was 42 per each bioreactor we have used.

The shape of the bioreactor blades is very similar to that of the air jet air crafts turbines shown in Fig. 2 below but the exact shape of said stainless steel blades is proprietary as is not shown herein.



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Fig. 2. The shape of the impeller blades in our bioreactor is very similar to that of the air jet turbines blades but it is proprietary and it will be discussed in detail in a separate article.

Fuel Isobutanol was manufactured using our genetically engineered biocatalysts as that is discussed in [16,28-40]. the fuel DAA was created from the Carbon Negative acetone manufactured before using the technology we have already described [41] by the condensation of the two Carbon Negative acetone molecules over the alkaline catalyst as described [42]. Said Carbon Negative fuel Isobutanol and the fuel DAA were used in the mixture with other Carbon Negative fuels and that is sold to the customers. In case of fuel Isobutanol its known its relatively high viscosity causing problems in the cars / trucks fuel lines at low air temperatures if fuel Isobutanol was used pure [16,43,44]. But the combination of it in the described mixture removes the high viscosity problem. Said

problem with elevated viscosity does not exist for the said mixture of the Carbon Negative fuels as we have discussed above: 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane [46], 30% Mesityl oxide [31-39,47] and 20% fuel DAA [31-39].

It is important to note that the impeller blades were placed on a 316S stainless steel shaft fixed in our horizontal bioreactor by the Podshipniks [43]. Said Podshipniks are the specifically designed for handling the rotating shafts and properly manufactured for handling and rotation elements providing long and productive life for shaft with the impellers shown in Fig. 5 and used in our horizontal bioreactor. Podshipnik is shown in Fig. 3.



Fig. 3. Podshipnik used in our horizontal bioreactor [27].

It is important to note that the Author was assassinated by SHELL after offering SHELL commercialization of his proprietary technology of Gasoline manufacturing from the air CO₂ (the Declaration of Interests Statement section of this

original article). As the response the Author has came up with the proposition to displace the existing petroleum corporations operating in the USA by the corporations manufacturing Carbon Negative fuels from the air CO₂ in sincere

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Author's intent to bring the air CO₂ content to the level of the year 1900 or just before the active petroleum fields discovery and exploration followed by the distillation of petroleum in the refineries itself producing the air CO₂ [27,47]. In response to that the Author has made this article using the US Constitutional freedom of speech [48].

It is also important to mention herein that the Carbon negative fuels were / would be sold at the

new type of the gas stations shown in Fig 4. below as the intelligent response of the Author to said his attempted murder by SHELL in response to offer of the Author to commercialize his proprietary technology of Gasoline manufacturing from the air CO₂ to resolve the ecological crisis the international petroleum corporations selling the petroleum originated fuels have brought our planet Earth.

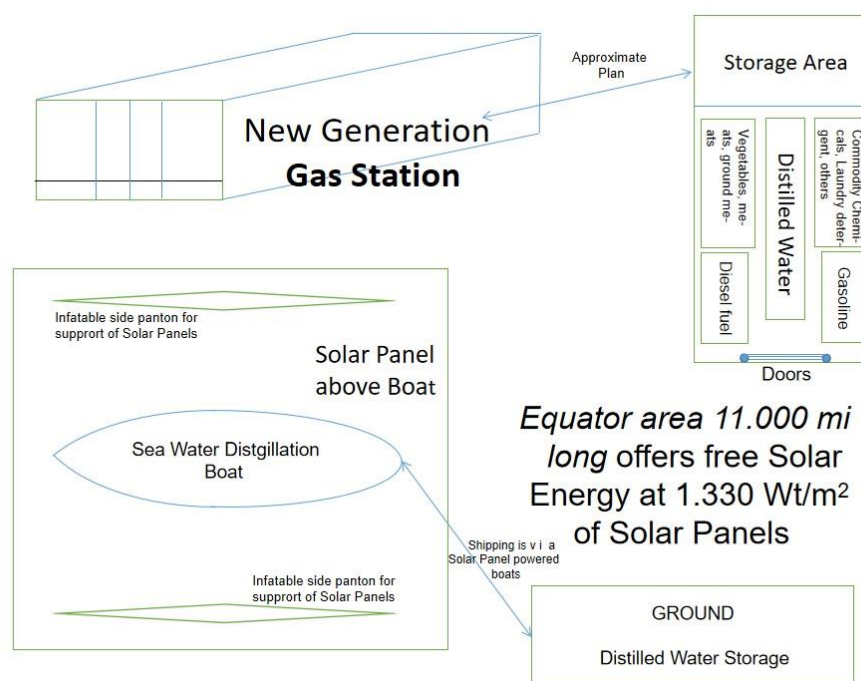


Fig. 4. The intelligent response of the Author to his attempted murder committed by SHELL (the HPD report is available for reference).

We have tested our Carbon Negative fuels of the set of corporate vehicles we have sacrificed for that purpose even without knowing the results of the testing performed but with the great hope that all said vehicles will survive said testing and will be used again but with only the Carbon Negative fuels. For said testing we have sacrificed corporate .2022 Toyota Camry, Peugeot 3008 and the diesel truck 2022 Chevrolet Silverado 1500 Duramax Diesel. The gas mileage in the town of Brownsville and on the highways was meticulously recorded by the respective chauffeurs Certified mechanics from the Toyota, Peugeot and Chevrolet dealerships were invited to the corporate garage of our corporations to meticulously check 1)stated cars driving and 2)

any mechanical damages, especially in the engine compartments, like gaskets on the engines anticipating damage of some of them after at least 10,000 miles of testing. The testing was performed for 20,000 miles for each test vehicle. The records on the gas mileage for all types of 280.tested cars are discussed herein.

We have mentioned herein that we sell our Carbon Negative fuels at the new type of the gas stations (Fig. 4) combining the sales of the Carbon Negative fuels and the sales of the certain goods for which the valued customers had to drive additionally to Walmart and to the grocery stores. And that we offer along with the ordering (includes also the on-line ordering) of the goods the customers could not find at the new type of

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the gas stations but need and had to drive to the next to the gas stations stores to purchase them. As we have noted before [64] the Environmental crisis as the result of the international petroleum corporations selling the fuels originated from petroleum will result in shortage of the fresh water on Earth due to its enormous evaporation to the Outer Space vacuum [1]. Therefore the sales of the distilled water by the new type of the gas stations is a mandatory process for us - we want to make as easy as possible the time of converting the World's economy from the dominance of the international petroleum corporations to the set of Carbon Negative fuel and genetically engineered foods corporations. As we have stated herein our intent is to ensure the valued customers will find the new type of the Carbon Negative gas stations a valuable option to save their time for not visiting on their cars the Walmart and the grocery stores. Certain foods for consumers there were prepared using the genetically engineered fungi (to be approved for the Nationwide use). We use the Ordering option for the goods not currently sold at the new type of the gas stations but had to be added for sales there to save the time for our valuable customers. For that purpose the sales people took the orders and there was also the on-line ordering system.

Results

The Author was really surprised when all his planned herein in this original article experimental parts worked well as described before [49-64] with the Carbon Negative replacements of Gasoline and Diesel fuel.

Data on testing of the Carbon Negative fuel using real Gasoline and Diesel fuels vehicles. Results of checking by certified mechanics from respective car / truck dealerships on no any visible defects or vehicles misbehavior while driving

The certified mechanics from the respective car / truck dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol [16], 30% fuel 1,1-dibutaneoxybutane [65], 30% Mesityl oxide [60]

and 20% fuel DAA [34-37]. Said mixture was also used to power the Diesel truck 2022 RAM 3500. The cars were placed on the treadmill with the device to check the engine emissions. No unusual exhaust gas emissions were ever tested and discovered in the exhaust gas of all tested vehicles.

No unusual emissions in the cars exhausts

No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public. The gas mileages of the cars used to test the mixture of the fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide and 20% fuel DAA as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry and Porsche Cayenne Turbo. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2022. This will become the risk of the other car owners, who will decide to replace their Gasoline with the produced from the air CO₂ mixture fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO₂, initially to resolve the issue of the transportation problems, substantially increasing the air CO₂ content via the air CO₂ accumulation and eventually to decrease the air CO₂ content causing the fresh water loss to the outer Space vacuum as stated before. The

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similar picture was seen if we used said mixture fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA to fuel the Diesel truck 2022 RAM 3500: highway mileage 37 mpg, town mileage 35 mpg for the long testing time of 20,000.

Fuel efficiency of the new carbon negative replacement of the Gasoline and Diesel fuel

For the use of said mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 30% Mesityl oxide [24,34,35] and 20% fuel DAA as the Diesel fuel replacement for over the 20,000 miles runs, the 5,000 miles old 2022 Chevrolet Silverado1500 truck was used for test runs on our carbon negative Diesel fuel for 20,000 miles.. The Diesel fuel mileage was achieved on the highway at the average diesel fuel mileage ~38 mpg, and at ~32 mpg driving in the city. The calculated the combined driving efficiency was about ~36 mpg. The Author does not take any risk in forecasting the Diesel fuel mileage behavior of the other diesel cars/trucks makes and per the mileage forecasting for the Diesel cars/trucks makes older than the year of 2022.

Discussion

NASA has stated in 2010 after measuring the air CO₂ content above 400 ppm that that was the “Point of No Return” to healthy environment on the Earth. Now the air CO₂ level exceeds 450 ppm. What that means and how do we plan to reduce the air CO₂ content to the level we have in our dreams - the air CO₂ level of the year 1900 or just before the active discovery of the oil wells and fields and the massive petroleum production and use fore distillation to manufacture Gasoline and Diesel fuel by the international petroleum corporations [1].

The air CO₂ is the heaviest gas of the air gas blend having density of 1.22 g/m³. The air CO₂ density exceeds 1.97 g/m³ [1]. Therefore by the gravity force the air CO₂ is covering the Ground. The Ground is the natural refuge for all kinds of fresh water: fresh water from rains, snow/ice melting, etc. The Ground is the place where from the creeks, rivers start from to go to the sea, lakes and

ponds. With the air CO₂ excessively covering the Ground it produces much more fresh water vapors as that was in the year of 1900. In the Southern States of the US the temperature of the Ground reaches 100°C and up. The fresh water trapped in the Ground might even boil increasing the evaporation of the fresh water vapors to the air. The air is attached to the Ground by the gravity force. The average thickness of the air layer above the Ground is about 400 miles. The other end of said air layer is the outer Space vacuum. In 2010 NASA has found a lot of ice on the dark surface of the Moon. NASA has concluded that ice was captured by the dark surface of the Moon (-293°C) and the fresh water vapors came from Earth. The Moon worked as the “cold trap” for said vapors. Compare diameters of Earth and the Moon, thinking that the Moon is located in 200,000 miles distance from Earth [1].

What that means? Earth is wasting its fresh water to the Outer Space. How to stop it? This might be stopped by the stopping the air CO₂ production. Can we stop using the produced by the international petroleum corporations originated from petroleum fuels? Apparently the answer is NO. For that purpose we have developed our Carbon Negative fuel and food corporations and manufacture the Carbon Negative genetically engineered foods. Therefore we are offering the Carbon Negative fuels and genetically engineered Carbon Negative foods at our new type of gas stations instead of the widely used Gasoline and Diesel fuel manufactured by the international petroleum corporations from petroleum on the over 80 in the continental US refineries to distill said petroleum to the gasoline fractions (C₇-C₉) and Diesel fuel (C₁₀-C₁₅) and sold to customers Nationwide and World-wide.

The described for the Acetogen biocatalysts the new type of the horizontal bioreactor design has the three gas blend diffusion stones per the perimeter of the bioreactor to ensure the even distribution via the total number of said diffusion stones was per each bioreactor of the feeding Acetogen biocatalysts with the gas blend components to feed the biocatalysts. Fig. 5 shows only one of the three said diffusion stones. Our horizontal bioreactor for the manufacture of the Carbon Negative fuels has three said diffusion

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stones per the perimeter of the immersed to the medium part thirty inches apart from each other with the total number of said stones 42 [27].

The Author suggests his own Carbon Negative fuels sold at the new type of gas stations shown in Fig. 4. The resolution of the global

environmental crisis the Author has discovered and claims it will happen in the next 10-25 years shown in Fig. 5. The resolution is the replacement of the international petroleum corporations by the Carbon Negative fuels and genetically engineered foods corporations like those the Author has now.

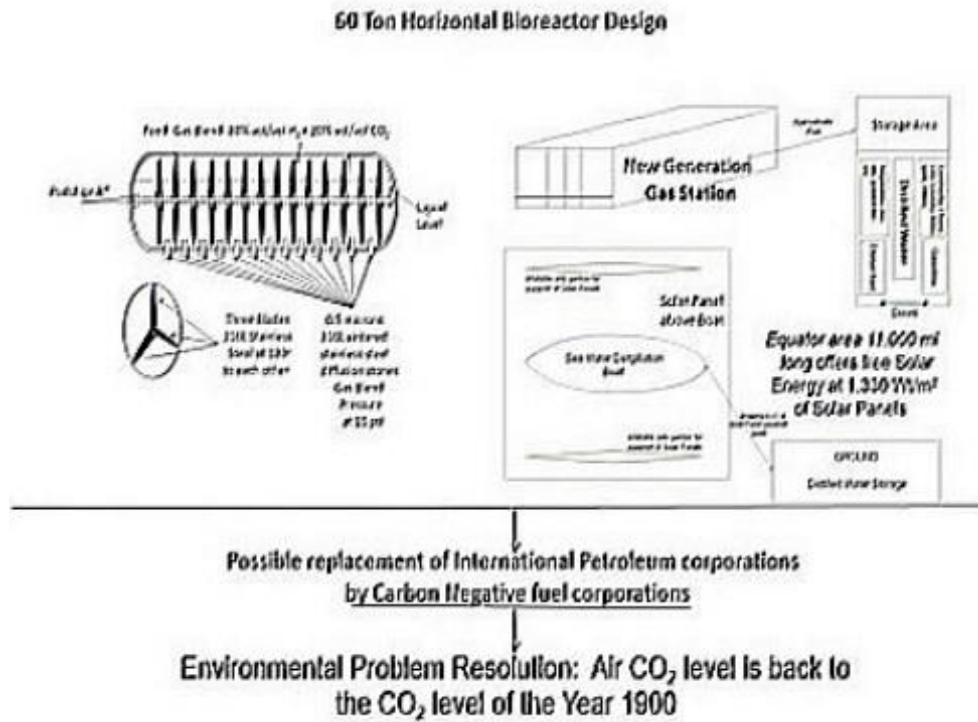


Fig. 5. Intelligent resolution of the global environmental crisis the Author has offered to fight the fresh water shortness and related to that shortage of foods.

The new gas stations (Fig. 4) selling the Carbon Negative mixture as we noted above: 40% of fuel Isobutanol, 30% fuel 1,1-dubutanoxybatane, 10% Mesityl oxide and 20% fuel DAA along with the genetically engineered foods and normal foods for the home cooking of the customers showed pretty much promising tendencies of the improved sales of both the Carbon Negative fuels and the foods for the home cooking and consumption. Additionally said gas stations sell to the customers the chemicals widely used by the household - and this all just to save the valuable time for the valuable customers. Apparently customers really appreciate the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the Carbon

Negative fuels. Basically we have reached our goal; the new kind of the gas stations probably will replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum and killing Earth by the waste of fresh water to the Outer Space.

Actually, said above the new type of the gas stations along with the offered there Carbon Negative fuels is the delicate and intelligent response of the Author to his attempted murder committed by SHELL in response to the Author's offer to SHELL go start the manufacture of the Carbon Negative fuels.

We are very much concerned about the amount of the fresh water reserves on Earth. Fig. 9 shows the Governmental data on that [33]. Fig. 10 elaborates these data.

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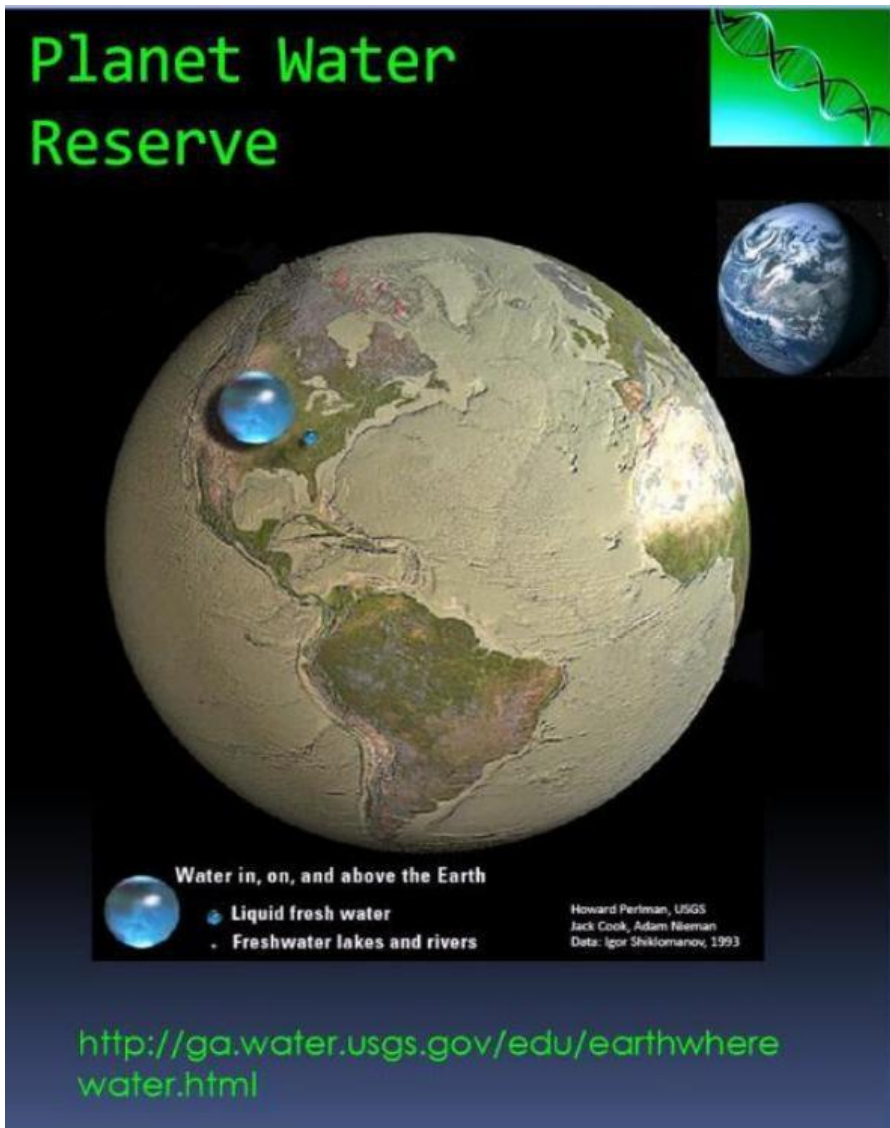


Fig. 6. Fresh water reserves of Earth [66].

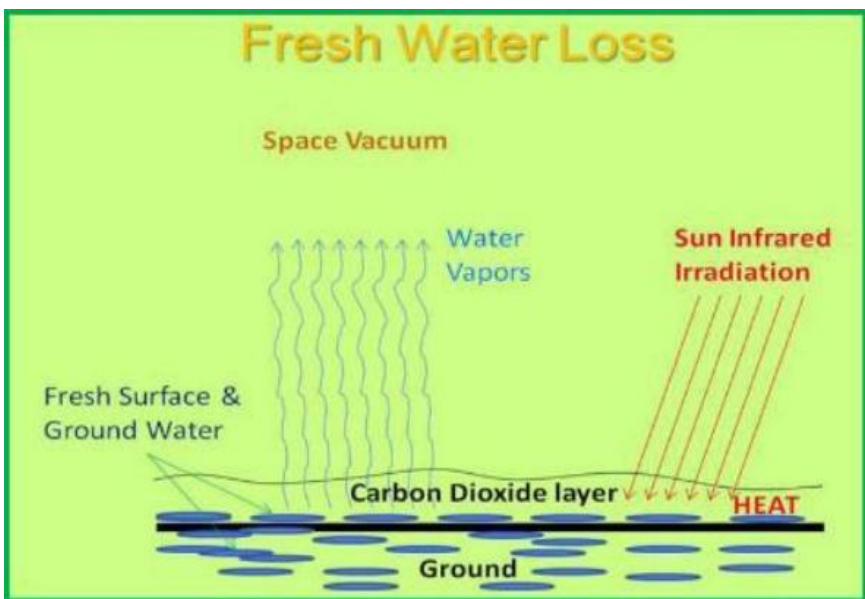


Fig. 7. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO₂ concentrations [1,5,].

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The Author came to Houston in January of 1998 (the time for the weather change is only 25 years). He was pleased by the Houston warm weather and always blue bottomless sky. Just in passed from that time years the Houston weather has changed. There is rain almost every day now. Rain is good as more fresh water comes to the Ground. However we need to realize that the Earth atmosphere which is only 400 miles thick above the Ground and ends up with the Outer Space vacuum sucking the fresh water vapors from Earth's atmosphere if the air CO₂ exceeds certain levels. Said atmosphere structure is not even. Important is the closeness to Houston of the Mexican Gulf. Air CO₂ spreads over the ground and the sea water. Sea does not boil but what the processes are at the thing layer of the air CO₂ and the neighboring sea water the Author is not sure. It might be evaporating so much that now the Houston weather has dramatically changed. The days are cloudy, and the clouds come from the evaporated by the Mexican Gulf sea water. There is the shortage of fresh water coming to Earth. Shortage of the fresh water means shortage of livestock and crops production - there will be nothing to eat in 10-25 years from now. This is the projection offered by the Author in this article. Rains are at the atmosphere's bottom. Above that there are different events and above that is the Space vacuum. Therefore, the rainy now weather in Houston reflects the substantially increased amount of the fresh water vapors in the air gas blend blend. Specifically, with the changes in Houston weather you can easily see that over accumulated air CO₂ boils sea water in the Mexican Gulf. Most part of Mexican Gulf is in the Equator area where the Sun gives for free to us up to 1,330 Wt/m² of the solar panels. The same happens with the air CO₂ which selectively absorbs the solar light infra red energy and converts it to heat. That heat boils sea water on the surface of Mexican Gulf changing in Houston weather now. South winds bring evaporated from Mexican Gulf fresh water condensed in the clouds often offering rain these days. Only 25 years from the Author's arrival to Houston and such a dramatic weather change there. So, you can easily see that the changes to the fresh water evaporation to the Space vacuum are coming as we now project - in the next 10-25 years from now. Fresh

water shortage will mean the shortage of the crops and the livestock production. The ecological crisis is coming and it will be the worst in the history of the humankind. The Author plans to prevent that from happening. By the establishing the domination of the Carbon Negative corporations both fuel and genetically engineered foods for feeding the anticipated starving customers.

The planned price for the Gasoline and Diesel fuel replacements is planned at the level of \$2.60-\$2.70 per gallon regardless if the fuel will be used for the Gasoline or Diesel fuel powered cars / trucks. We have not had a chance to investigate the suitability of this new Carbon Negative mixture use for powering of the air jet turbines yet [67]. We are confident it will work even there but we have to check it thoroughly and meticulously there like we did with the Gasoline or Diesel fuel powered cars as noted in this article.

Therefore we are going to save the Earth's fresh water escaping to the outer Space by substantial use of the air CO₂ for production of carbon negative fuels and Carbon negative genetically engineered foods. What fresh water shortage mean? No crops and no livestock production. Global starvation is coming to Earth. And we are going to revert it by noted herein in this article means. The Author claims he will save this world and he will save the Earth's fresh water.

Declaration of Interests Statement

Ethics approval and consent to participate.

The Author has received all the proper documents granting the Ethical Approval and the Consent to Participate from the State of Texas officials. The Author has made sure that the ethical approval and his consent to participate in preparation and submission for publication of this article were properly approved by the respective authorities of the State of Texas.

Consent for publication.

The Author has expressed his complete consent to participate in work with this article and its publication in this Journal.

Availability of data and materials.

The Author makes all his data and materials herein available for any third party. The data and materials might be obtained from the Author at PO Box 300230, Houston, TX, 77340. Email drmtyrin75@gmail.com. If any third party needs

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any materials used to publish this article, please, do contact the Author.

Competing interests.

This article is another the Author's move in the war which has started by SHELL International Petroleum Corporation some time back by attempted murder of the Author. The people hired by SHELL has totaled the Author's corporate car and did some other illegal things to the Author which have concluded the Author that the war with the international petroleum corporations has started already. No Houston FBI or Houston Police investigation of said attempted murder has happened and this is behind the responsibility of the Texas Governor with all the legal remedies the Author might use in his fight to sue the State and its Governor Gregory Abbott. The attempted murder has the statute of limitations 20 years, and there are jurisdictions above the level of the State of TEXAS. The Author had certain legal problems with the at that time Attorney General of the State of Texas in 2013, now Texas Governor, Greg Abbott and the Author is going to resolve all the legal problems with the Texas Governor, regardless would he be dismissed or not. The corporate Author's website <http://syngasbiofuelsenergy.com> was destroyed by the person, the Attorney of Hirsch and Westheimer Law Firm, PC by the last name Levy. She belongs to the same family which owned or owns the grocery stores chain named "Fiesta" in Houston Texas. The Author was unable to find a lawyer in Texas to file the respective federal law suit and recover his corporate website, but the Author has the US Constitutional right to recite this website in the references herein. Therefore the Author has multiple legal problems with the State of Texas and the Author is going to resolve said legal problems at the respective Court level in the US. Dr. M.V. Tyurin was already involved into the war which has been started by the International Petroleum Corporation SHELL. Dr. M.V. Tyurin has approached SHELL offering them for the commercialization the proprietary technology of Gasoline or Diesel fuel manufacture from the air CO₂, not from petroleum which SHELL and other international petroleum corporations use. SHELL representative met Dr. M.V. Tyurin, got his draft of the at that time in publication article on creation Gasoline from the

air CO₂ [1,21-24,41,42]. SHELL hired two Mexicans to kill Dr. M.V. Tyurin in the car accident, paying the possibly around \$6,000 for this dirty job, which has been done in Houston TEXAS at the US59 down South (9494 Southwest Fwy). The Houston FBI and the Houston Police were contacted by Dr. M.V. Tyurin multiple times over his mobile phone however there was no any detailed and thorough Police or the FBI investigation of said attempted murder of Dr. M.V. Tyurin since as Dr. M.V. Tyurin trusts, both Houston FBI and Houston Police are totally corrupted by the international petroleum corporations. Therefore any law is not used in the State of Texas to hurt said corporations. Therefore Dr. M.V. Tyurin has to look for the law enforcement outside of the State of Texas, at the National level and he will do that to affect the Texas Governor Abbott for his actions of 2013 and have him resign from his position. Therefore the Author has conflict of interests with the State of Texas, TEXAS Governor Gregg Abbott, Texas FBI and Texas Police. Since that time more scientific publications by Dr. M.V. Tyurin on the Gasoline and Diesel fuel production from the air CO₂ came out [15-49]. The US patents are extremely expensive, therefore Dr. M. V. Tyurin uses instead of patents scientific publications. Publications are as good as the US patents, each the US patent has to claim something better than Dr. M.V. Tyurin already did in his scientific publications. Dr. M.V. Tyurin working on the Acetogens-biocatalysts has no any competition in the world because of his prior invention, the electroporation / electrofusion Generator, already sold as a sample (with no right for reproduction) to the US corporation BTX, Inc. / Genetronics, Inc. (San-Diego, CA). Said Generator [16] and the invented by Dr. M.V. Tyurin genome tailoring technology [15 - 49] make him with no any competition in the whole World.

Mentioning of names Dr. Gak, Dr. Kiriukhin, Dr. Padda in certain publications herein and elsewhere (Tyurin MV, Padda RS. (2019) Nitrogen gas reducing commercial acetogen biocatalyst suitable for direct and selective reduction of CO₂ inorganic carbon to organic carbon and atmospheric nitrogen to fuel isobutanol during continuous fermentation of CO₂ + H₂ + N₂ gas blend. International Research Journal of Applied

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<http://www.ncbi.nlm.nih.gov/pubmed/24659176>)

has no practical authorship of said publications meaning since said individuals got paid by the Author significant amounts of cash for doing research for the Author per the topics he ordered them to investigate and provide the detailed reports to him. However their names are included in said specific publications since they have worked on said topics. Name of Vel G. Berzin is also included and has no scientific meaning since Mr. Berzin was a friend of the Author some time back, Mr. Berzin paid his own \$300 for starting the corporation Syngas Biofuels Energy, Inc. for which he did not provide any scientific input including the corporate website <http://syngasbiofuelsenergy.com>. Mr. Berzin has retired from the public life when he became 65 and he keeps his current location at the nursing home very confidential for the Author.

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Authors' contributions.

The Author has conducted all the experiments himself. The Author has planned, wrote this original article and edited the written text, including proper placement of the illustrations mentioned which the Author owns. The Author read, edited and approved the final manuscript. The Author is the only owner of all materials disclosed in this original article. The Author has plans to distribute his proprietary products after their approval as needed. The Author might be contacted for the data and materials at PO Box 300230, Houston, TX, 77230, drmtyurin75@gmail.com. The Author contributed to the study conception and design. Material preparation, data collection and analysis were performed by the Author. The first draft of the manuscript was written by the Author. The Author read and approved the final manuscript.

The Author has designed the ideology of this article by himself. He collected the information on the absence of rapid tools for the recovery of infectious patients in his town of origin Saratov, the Russian Federation. Often patients suffering Cholera infection have their gastro-intestinal epithelium severely damaged by this infection and that normally takes them up top 28-36 days for the recovery after said infection severely damaging the gastro-intestinal epithelium. Therefore the Author has invented the “Mixture” of the surface polysaccharides normally produced by his intestinal isolates of bifidobacteria namely *Bifidobacterium bifidum*, *B. breve* and *B. longum* when isolated using his invented before selective medium for isolation of bifidobacteria from feces and grown after the isolation and thorough purification on the regular growth medium for bifidobacteria. Said polysaccharides were collected, purified and dissolved in the distilled water to form the solution to treat the recovering from Cholera patients along with the proper

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antibacterial treatment . The effect of adding said “Mixture” water solution to the regular antibacterial treatment was really tremendous: the recovery time for said patients has shortened significantly from 24-36 days to just 8-10 days, offering great saving effect to the doctors and the recovery clinics. The Grateful doctors of Saratov State Medical University have presented to the Author the images of the intestinal epithelium of the recovering patients he has placed into this article. The Author intends to develop the special structure in his Carbon Negative corporations to be in charge for the establishing and running clinical trials of his inventions he plans to commercialize additionally to his major business of manufacture of Carbon Negative fuels and Carbon Negative genetically engineered foods for the Nationwide distribution.

The Author has conducted all the experiments himself. The Author has planned, wrote this original article and edited the written text, including proper placement of the illustrations mentioned which the Author owns. The Author read, edited and approved the final manuscript. The Author is the only owner of all materials disclosed in this original article. The Author has plans to distribute his proprietary products after their approval as needed. The Author might be contacted for the data and materials at PO Box 300230, Houston, TX, 77230, drmtyrin75@gmail.com. The Author contributed to the study conception and design. Material preparation, data collection and analysis were performed by the Author. The first draft of the manuscript was written by the Author. The Author read and approved the final manuscript. The Author has designed the ideology of this article by himself. He collected the information on the absence of rapid tools for the recovery of infectious patients in his town of origin Saratov, the Russian Federation. Often patients suffering Cholera infection have their gastro-intestinal epithelium severely damaged by this infection and that normally takes them up to 28-36 days for the recovery after said infection severely damaging the gastro-intestinal epithelium. Therefore the Author has invented the “Mixture” of the surface polysaccharides normally produced by his intestinal isolates of bifidobacteria namely *Bifidobacterium bifidum*, *B. breve* and *B. longum*

when isolated using his invented before selective medium for isolation of bifidobacteria from feces and grown after the isolation and thorough purification on the regular growth medium for bifidobacteria. Said polysaccharides were collected, purified and dissolved in the distilled water to form the solution to treat the recovering from Cholera patients along with the proper antibacterial treatment . The effect of adding said “Mixture” water solution to the regular antibacterial treatment was really tremendous: the recovery time for said patients has shortened significantly from 24-36 days to just 8-10 days, offering great saving effect to the doctors and the recovery clinics. The Grateful doctors of Saratov State Medical University have presented to the Author the images of the intestinal epithelium of the recovering patients he has placed into this article. The Author intends to develop the special structure in his Carbon Negative corporations to be in charge for the establishing and running clinical trials of his inventions he plans to commercialize additionally to his major business of manufacture of Carbon Negative fuels and Carbon Negative genetically engineered foods for the Nationwide distribution.

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Winkelman for his help to receive funds for the transportation of said Generator from Moscow to San-Diego via UPS in 1995. The Author herein confirms help of Dr. Nikita Tamm from the Moscow State University for his help in receiving cash in \$ in Moscow, the Russian Federation, from San-Diego, CA in 1995.

Authors' information.

The Author has the B. Sci. In Biological Engineering (1984), M. Sci. In Biology (1985), M. D. in Internal Medicine (1986) (all from Saratov State Medical University, the USSR) in addition to the Ph. D. in Molecular Biology, Molecular Pharmacology, Microbiology (1990) from the USSR Research Institute for Antibiotics (Moscow, the USSR). The Author at his corporations can be reached at PO Box 300230 .in Houston TX 77230 and via Email drmtuyurin75@gmail.com. The Author's ORCID is 0000-0001-6943-6556.

Originality-Significance Statement

The Author has wrote this original article based on his originality of the business approach and the existing resistance of the International Petroleum corporation to the technology of manufacturing carbon negative fuels to replace their production of fuels originating from petroleum. The reduction of the air CO₂ levels towards the pre-petroleum era of the year 1900 is paramount, since our planet loses fresh water to the outer Space vacuum. NASA has confirmed that in 2010 stating that the Earth has reached the "Point of No Return" to the healthy environmental conditions suitable for life on our planet. The new family of the gas stations selling not only Carbon Negative fuels but also foods for cooking at home and commodity chemicals for the households will save a lot of time for the customers of said new gas stations.

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