

Review Article

Optional Solution for Fight Against Global Climate Change.

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I began to study the project to overcome the greenhouse effect to combat global climate change since 1996. My research results have been published [1- 4] with the following conclusions:

Conclusions of The Project

Conclusion on The Generation of The Suitable New Equipment

If we want to solve large and difficult problems as to handle industrial-scale emissions of millions of m³ per hour, we need a generation of the suitable new equipment. If we do not find new devices such as 9 new dust separators, 4 gas liquid solid heterogeneous reactors, continuous filtration decant flocculation tank, make sure that we cannot resolve completely the issues.

Conclusion on the Suitable New Technologies

There are new devices, not entirely solve the problem, the more important is to find the new technologies. There is a need to be the new no-waste technologies. As this, a high economic efficiency as possible, environmental protection issues solved thoroughly. Thanks to the new no-waste technologies are applied, we absolutely can handle industrial emissions with any large scale. We absolutely can overcome greenhouse effect.

Conclusion on the Two Stages for The Treatment of Industrial Exhaust Gas

We believe that treatment of industrial exhaust gas to go through the following two stages: Stage 1- Treatment to thoroughly the dust and toxic acid oxides contain in the industrial emissions, because, Industrial dust and toxic chemicals have killed millions of people each year. Thus, from any basis for any production, big or small, exhaust gas lines must be treated dust and toxic acid oxides, prior to discharge into the human living environment. Stage 2 - CO₂ separation of from industrial emissions.

Conclusion on the Co2 Separation from the Industrial Emissions, Transportation and Storage of CO2

Based on a new technology proposed by us, the CO₂ separation from industrial emissions, as well as storage and transportation of it can be under the form of powder NaHCO₃.

Conclusion on The CO2 Storing on The Deep Ocean

Solution 1: Storing CO₂ in the form of Clean liquid.

Solution 2: Storing CO₂ in the form of dry ice.

Conclusion of economic Efficiency.

The project will be implemented through a variety of levels, ranging from small to large and so, economic performance will be expressed differently. In the first stage, the product is not large, but very valuable, because it is food clean liquid CO₂ or dry ice. If we provide these products to the food industry, we get very high profits. Then, when we have enough supply for the market, we can begin to

bury CO₂ on the ocean floor:

- if CO₂ will be buried in the form of clean liquid CO₂ at a cost about ten times smaller the current cost (theoretically).

- if CO₂ storage in the form of dry ice, the cost will be very small compared to current costs of bury in the form of clean liquid CO₂.

General Conclusion

Summing up, we can recognize that, we absolutely can handle industrial emissions for any scale, especially industrial waste gases emitted from thermal power plants using fossil fuels, so, greenhouse effect as will be resolved, by new no-waste technologies. Make sure that the living environment for humans will be protected, on the other hand, if we come to a decision, it is imperative to thoroughly handle dust and toxic acid oxides of all industrial waste gas stream, to ensure habitat for humans. So, we can co-solve the two problems are equally important: A-Environmental Protection of human life. B-To overcome the greenhouse effect to anti global climate change.

The success of this project, allows us to think about productions by no-waste technologies, as well as the no-chimney industries in the near future.

The content of the project is confirmed by 23 international awards at the 2017 Canada Innovation Invention Competition in Toronto (See the list of international awards below).

Currently, at the forum of the international conference on global climate change, people only focus on developing renewable energy and eliminating the production of energy from fossil fuels, which in my view is not reasonable. There are many countries including Vietnam, we cannot solve the problem of electricity if we completely eliminate the use of fossil fuels to produce electricity. We will be very wasteful if we immediately remove thermal power plants with fossil fuels. Ask which solution is economical in producing electricity with fossil fuels?

Clearly the above-mentioned solution will exist if we pay attention to our achievements [1- 4]. Our success focuses on three key issues:

1-Propose new equipment and new technology to process and reuse industrial emissions at any scale.

2-Propose new equipment and new technology to separate CO₂ from industrial waste sources of any size.

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3-Propose a very cheap new solution to temporarily preserve CO₂ to the ocean floor.

For power plants that already exist with fossil fuel we shouldn't, and it is impossible to eliminate it immediately, but we need to quickly proceed with the emission treatment according to our new solution above

The annual amount of CO₂ emitted into the earth's atmosphere is a huge amount, if all of this CO₂ must be buried in the ocean floor, it will be very expensive and wasteful. We must quickly promote research on Chemical Utilization of CO₂ into Chemicals and Fuels [5,6]. We must have a strong solution for this research direction.

On the cover 2 of my book wrote: Combating global climate change is the responsibility of everyone on this planet. Rich countries are responsible for financial assistance so that poor countries can fulfill their obligations. I think with the coordination of the United Nations, the fight against global climate change, according to the Vietnamese method will be carried out quickly and effectively on a global scale, tragedy of humankind will be eliminated, As the author of the project I promise to cooperate effectively with anyone who requests. Table 1

I want to reiterate my mind about the decisive role of the United Nations. The United Nations must be the coordinating agency for anti-global climate change cooperation. First, the United Nations must organize an international conference to adopt a possible solution to overcome the greenhouse effect to combat global climate change, then unified the international action program, how can all poor or rich countries be able to carry out overcoming the greenhouse effect to combat global climate change in their own territory.

Currently there are nearly 10 million deaths annually due to industrial emissions [7], while in my list of awards there are 9 awards for 9 industrial dust separators, these are prizes from number 1 to number 9. Therefore, if we successfully apply our project, we will escape 2 human tragedies that are tragic due to global climate change and tragedy due to industrial emissions.

Table 1

No	Inventors	Title of Entry	Awards
1	Nguyen Dan	Upgrade dry cyclone dust separator	Gold Medal
2	Ngyen Dan	Combined Upgrade Dry Cyclone Dust Separator	Silver Medal
3	Nguyen Dan	Upgrade wet cyclone dust separator	Gold Medal
4	Nguyen Dan	Combined upgrade wet cyclone dust separator	Gold Medal
5	Nguyen Dan	Dry and wet sinuous dust separator	Silver Medal
6	Nguyen Dan	Dry centrifugal cyclone dust separator	Gold Medal
7	Nguyen Dan	Wet centrifugal cyclone dust separator	Gold Medal

8	Nguyen Dan	Dry centrifugal filtration dust separator	Gold Medal
9	Nguyen Dan	Wet centrifugal filtration dust separator	Silver Medal
10	Nguyen Dan	Interrupt gas-liquid-solid heterogeneous reactor (GLSHR)	Gold Medal
11	Ngyen Dan	Combined Interruption solid-liquid-gas heterogeneous reactor (SLGHR)	Gold Medal
12	Nguyen Dan	Vertical continuous solid-liquid-gas heterogeneous reactor (SLGHR)	Gold Medal
13	Nguyen Dan	The combined vertical continuous solid-liquid-gas heterogeneous reactor (SLGHR)	Gold Medal
14	Nguyen Dan	The vertical continuous centrifugal decantation machine	Gold Madal
15	Nguyen Dan	Vertical disruption decantation centrifugal machine	Silver Medal
16	Nguyen Dan	Continuous Filter and Decantation Flocculation Tank	Silver Medal
17	Nguyen Dan	Rotary furnace for the NaHCO ₃ thermal decomposition in liquid phase	Gold Medal
18	Nguyen Dan	Continuous dryer	Silver Medal
19	Nguyen Dan	The no-waste technology to process and utilize industrial emissions	Gold Medal
20	Nguyen Dan	The process of separating CO ₂ from industrial exhaust gases in the form of food clean CO ₂ or dry ice	Gold Medal
21	Nguyen Dan	The CO ₂ separating process from industrial gases in the form of NaHCO ₃ moisture powder	Gold Medal
22	Nguyen Dan	Method #1: Capturing CO ₂ from industrial emissions, preserving it, transporting it in the form of wet NaHCO ₃ burying it to the bottom of the ocean in the form of food clean liquid CO ₂ .	Silver Medal
23	Nguyen Dan	Method #2: Capture CO ₂ from industrial emissions, preserve CO ₂ , transport, as well as store it on the ocean preserve CO ₂ , transport, as well as store it on the ocean floor in a form of dry ice	Silver Medal

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