

There Is A Solution To Climate Change ~ And It Is Carbon Negative Technology



Climate change poses the greatest threat to human civilization as we know it. Yet, governments around the world are reluctant to take drastic action to avert a climate change catastrophe even though we have the means to do so, as I will point out in the latter part of this essay.

But let's take things from the start and look at the latest attempt of the part of the world's governments to redress the problem of climate change, i.e., the Paris Agreement of late 2015.

In contrast to the Kyoto Protocol, whose provisions run out in 2020, the Paris deal includes no legally binding carbon dioxide emissions limits. There are no mandatory emission limits and no mandatory payments to help poor nations develop clean energy technologies, nor to mitigate the damages caused by climate change on poor nations, when the damage was historically caused by the rich nations. Mandatory emissions limits are necessary for the carbon market to operate. What is traded in the carbon market is the right to exceed one's mandatory limits. With no mandatory limits, there can be no carbon market. The entire world is clamoring for a "price on carbon": this is the carbon market. The six largest oil and gas companies in the world publicly support a price on carbon (Including Shell, BP, Statoil, Total and Engie). Yet the Paris Agreement undermines the very foundation for a price on carbon by requiring no mandatory emission limits.

Why did the Paris climate change negotiations move away from mandatory

targets on carbon emissions and adopted instead a voluntary approach to the climate change challenge? Because a legally binding treaty that needed ratification by governments back home would have reduced substantially the chances of reaching any kind of an agreement.

This is certainly the case for one of the world's biggest polluters, i.e., the United States. Any treaty on climate change that made its way to Capitol Hill would be shredded into pieces by the Republican-controlled Congress.

However, as time goes by, it is certain that more and more people will realize that the political compromise made in Paris over mandatory emissions comes at a great cost. Our ability to control rising temperatures caused by carbon dioxide accumulated in the air is greatly hindered since voluntary agreements guarantee failure.

But there is more. As the latest Intergovernmental Panel on Climate Change report points out, carbon emission cuts are not enough to slow down global warming. According to IPCC, we are headed with certainty towards an increase in temperatures by three degrees Celsius by 2100, although there are scientists who believe that two degrees of warming is "a recipe for disaster." It suffices to recall the superstorm Sandy that closed down New York City for weeks, with flooded subways, leaving entire neighbourhoods without electricity, no schools, no law enforcement, and automobiles floating in the streets of this proud city. Climate change means an increase in the frequency and severity of such climate events. This means three or four Superstorm Sandies every year in New York, and the city cannot survive such climate change.

In addition to reducing drastically emissions through mandatory limits and adopting clean energy systems, it is now imperative that we utilize negative carbon technologies to remove existing carbon dioxide from the air. This was required by the IPCC, the scientific foundation of the climate negotiations, in its November 2014 5th Assessment Report. We procrastinated too much and now we have to massively reduce the CO₂ that is already in the atmosphere in addition to reducing emissions. There are carbon negative technologies in Silicon Valley, like those employed by Global Thermostat, that are operating at SRI in Menlo Park California, which can offer a solution to the greatest threat facing the future of human civilization as we know it. This requires that we accept mandatory emission limits and reactivate the carbon market that is based on mandatory

emissions, and was trading \$175Bn/year by 2011.

The funding from the carbon market suffices to implement and scale up carbon removal around the world, as the IPCC requires, for example through carbon negative carbon plants that clean the atmosphere while they produce electricity- and do all of this in a low cost and profitable fashion. A proposal made by the author in Copenhagen COP15 was to use the Kyoto carbon market to offer finance to scale up globally such carbon negative carbon plants in poor nations, thus providing electricity that is needed by 1,3 Bn people around the world that currently have no access to electricity, all this while cleaning the planet's atmosphere. This was called the Green Power Fund and required \$200Bn/year for building carbon negative power plants; instead the Green Climate Fund was made into law, changing one word in its title and severing its connection from the source of funding, the carbon market of the Kyoto Protocol.

The reason the Climate Fund had its connection severed from its very source of funding, the carbon market of the Kyoto Protocol, was none other than the insistence of the US Congress - through its unanimously voted Byrd-Hagel Act — that there be no mandatory emissions limits.

But there is technology that can remove carbon from the atmosphere as required by IPCC. It is already operating in the Silicon Valley.

The carbon negative technologies in Silicon Valley, like those employed by Global Thermostat, which are fundamentally different from the now defunct carbon capturing and storing technologies, can offer a potential solution to the greatest threat facing the future of human civilization as we know it.

Such technologies, if employed on a global scale, can be used to clean the air from carbon dioxide, acting like trees do but much faster, as is needed now. Moreover, they are quite inexpensive and offer the potential of financial rewards, thus making them an attractive incentive to investors and entrepreneurs since, again, the logic of the global economy is not going to change overnight and we certainly cannot wait for the materialization of the “ideal society” for the planet and the future of human civilization to be saved.

At the same time, this is not to suggest that technology is magic. Technology does not exist in a vacuum nor can it be expected to be our robotic slave. We need to change today's global financial institutions and the prevailing economic values as

well. Economic values decide what is meant by economic progress. Today, economic values are based on short-sighted goals and on individualistic markets that defy logic, since they assign no value to clean air, to clean water or to biodiversity on which human survival depends. Assigning no value to the global commons-clean water, clean air, and biodiversity-leads to actions that threaten human survival. This has to change and can change. In the new Anthropocene era, humans are the most important geological force on the planet, and only with the right economic values can humankind survive.

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