

Energy & Environment

Two Seeds with Irresistible Growth

Graciela Chichilnisky
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China has become in the last few years the world's largest emitter of CO₂, followed closely by the USA. It has a voracious use of natural resources – most from Latin America – as is usual for nations with a rapid rate of industrial growth. Yet the average Chinese citizen emits only one fourth of the carbon emitted by an average US citizen, and China remains a poor country. It needs economic growth to absorb over 500 million people that are moving from the countryside to the cities. The US has a similar problem but its rate of growth is slower as it corresponds to a more mature richer nation. Economic growth in both nations means energy and energy until now means fossil fuels. Growing the economy therefore means using more energy and emitting more CO₂. The attendant environmental problem in China is obvious to the casual observer who finds that the sky in Beijing is often yellow rather than blue. Economic growth and employment are the single most critical issues in this year's US Presidential election.

Is there a way out of the cruel equation that equates economic growth with environmental damage? What is the solution for the world's two largest emitters of carbon – a gas that could cause catastrophic climate change?

Building on China's own experience of success with the Kyoto Protocol Carbon Market it is possible to see a path that would allow both to grow while cleaning up their own environment – and indeed cleaning the world's atmosphere as well. China knows the way, since it obtained about \$25Bn in credits from the Kyoto Protocol Clean Development Mechanism that helped it become – in a short period of time since the Protocol because international law -- the largest exporter of clean energy equipment in the world, both solar and wind. China's success made the US question in the WTO the commercial fairness of China's clean energy policy. China is determined to move to the green economy but only a profitable way to do so will work. The tradeoff between growth and the environment leaves the latter in the dust. Here is the solution in a nutshell. It is possible to build carbon negative power plants that burn coal and yet they capture more carbon from the atmosphere than they emit. These are carbon negative power plants. The more power they produce the more they clean the atmosphere. And the funding could come from the Carbon Market of the Kyoto Protocol which is already trading \$200 Bn/year and could fund carbon capture projects – this was endorsed by the UN climate agreements in Durban December 2011. The path proposed works for both nations, and it is based on two seeds with irresistible growth.

The first seed is a \$200 Bn/year 'Green Power Fund'? that this author conceived and brought to the attention of the US State Department at Copenhagen COP15, involving public and private funding (the carbon market as well as global finance), This Green Power Fund proposal has succeeded in a modified form. It was announced officially at Copenhagen in December 2009 by US Secretary of State Hillary Clinton two days after I proposed it to the US State Department in

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writing. And two years later in December 2011, a \$200 Bn/year Green Climate Fund emerged at Durban COP 17 as the solution that the nations of the world agree on and the main hope for the global climate negotiations. The second seed involves reforms to the Clean Development Mechanism that I initiated in Copenhagen COP 15, which are still growing strong and can support the main technology hopes to redress climate change. This means funding carbon negative technologies that capture CO₂ and sell the CO₂ for industrial uses such as enhancing oil recovery and the production of synthetic fuels – all of which makes the process of capturing carbon profitable. This means more growth and a cleaner atmosphere.

The proposals benefit the world as a whole, and particularly the poor developing nations. It calls for a \$200 Bn a year private/public fund to build green power plants in developing nations, in particular, in low emitting nations in Africa, Latin America and the Small Island States. The proposal is gathering support from a number of nations, including the US, Papua New Guinea, Costa Rica, Ghana and others. It agrees with the U.S. policy of involving the private sector and following market based solutions, and it supports also the developing nations' natural aspiration for preserving the integrity of the Kyoto Protocol with its binding emissions limits. Most of the yearly \$200 bn I propose will come from the private sector, so it is important to indicate how the private sector is likely to step up to the plate and provide the funding needed. The rationale revolves around the critical role played by energy, which is the mother of all markets. Energy demand is rapidly increasing in the world economy, and most of the increase comes now from developing nations. The energy industry is aware of the strategic opportunity this creates for expanding their profitable activities into new developing regions where demand is strongest. Yet lack of funding in developing nations can be a problem. This problem can now be resolved by building "green" power plants with funding provided by the carbon market and its Clean Development Mechanism.

Investment bankers in the U.S. and the UK have already expressed great interest in raising the private funding that the fund will require that they considered quite realistic, all within the restrictions that the UNFCCC and its carbon market and CDM will impose as the administrators of the fund. The official support of China and the US at the climate negotiations will unleash the market liquidity and innovations needed. The ground is prepared.

By December 2011 the nations of the world met in Durban South Africa and agreed to continue the Kyoto Protocol's global carbon limits – which were to expire in 2012 – until 2015. In addition a Mandate was agreed to continue the global process after Durban – this Mandate requires that in 2015 there would be a global agreement incorporating all nations in the world and mandatory emission limits will be created by 2020. This Mandate achieved in Durban is an 'agreement to agree' – it is similar to the 1996 Berlin Mandate that led to the signing in 1997 of the Kyoto Protocol and the creation of its carbon market. The die is cast and China and the US can become the leaders in the global carbon negative technology. A Green Power Fund Can Accelerate the Adoption of Carbon Negative Solutions Worldwide. 2012 is the year of Sustainable Energy for All, with the objective of ensuring universal access to modern, sustainable energy services for all. The private energy sector is, in terms of emissions, the biggest problem, but is also the key to reaching this objective. The Green Power Fund can:

- Accelerate the Green Economy Globally
- Provide Sustainable Energy Access for All
- Finance Sustainable Development in the Least Developed Nations and Small Island States
- Create a Carbon Negative economy

A Green Power Fund can speed the transition to sustainable energy worldwide, by reducing current emissions and avoiding future emissions. To do so an agreement is needed to protect intellectual property rights so that China can import the innovative carbon capture technology produced currently in the US which has China as its most fertile market. Will this happen?

Graciela Chichilnisky is a Professor of Economics and Mathematical Statistics at Columbia University.

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