

Design to Win PHILANTHROPY'S ROLE IN THE FIGHT AGAINST GLOBAL WARMING

Source: Design to win report by [California Environmental Associates](#)

As scientific evidence of climate change has become clearer and more compelling, the prescription for changing course seems to have become more muddled and mysterious.

Philanthropists who are concerned about climate change are inundated with a dizzying array of often contradictory options and opinions. Never before have donors, foundations, policymakers and the general public confronted such a complex, far-reaching crisis.

Questions go by unanswered, as more and more time is lost. Should they back renewable power sources, such as wind and solar, or try to clean up coal-fired plants, or preserve biodiversity? Given the global scale of the predicament, where in the world should they allocate their precious resources? Which philanthropic investments will get the most carbon out of the atmosphere?

Left unattended, human-induced climate change could overshadow all our other efforts to cure diseases, reduce poverty. Global, collective action is paramount. The stakes – and hurdles – could not be any higher.

FIGURE 1: Design to Win Strategy

Suggested intervention priorities over time



Prioritizing the initiatives is of utmost importance. We were guided by philanthropy's comparative advantages. Politicians are fixated on the next election; CEOs are focused on next quarter's numbers. Philanthropists, by contrast, have longer time horizons and can tolerate more risk. Besides being more patient investors, philanthropists have a strong tradition of filling gaps, spurring step-changes in technology and pursuing programming that transcends both national boundaries and economic sectors. Such capacities are exactly what are needed to tackle global warming.

To clear the clouds of questions overhead, we tried to identify the priorities that will draw a road map for successful investment plans.

FIRST, DON'T LOSE:

Catastrophic climate change – far worse than anything we have experienced – will be unavoidable if we don't prevent a massive "lock-in" of emissions from new coal-fired power plants, long-lived industrial infrastructure, inefficient buildings, car-centric cities, and irreversible deforestation.

The urgent need to avoid locking in emissions is a function of how our biosphere behaves. Carbon dioxide (CO₂) and other heat-trapping gases persist in the atmosphere for centuries, so decisions made in the next 5 to 10 years will alter the Earth's climate for generations to come.

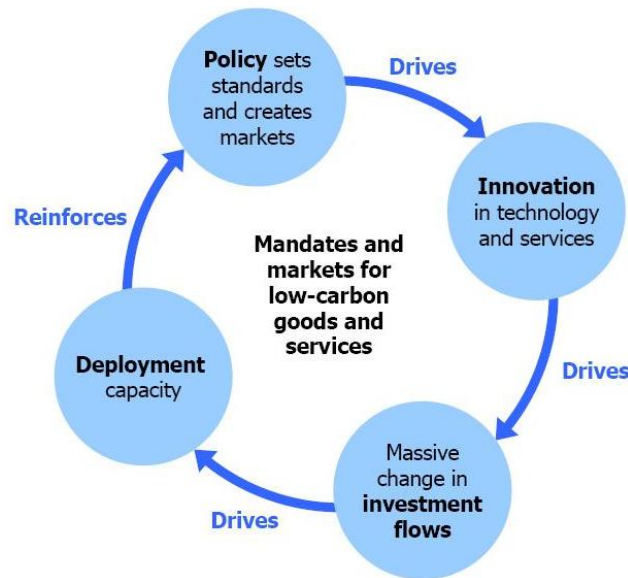
- **New coal plants** are the most troublesome source of lock-in. China is now building the equivalent of two, 500-megawatt coal plants every week.
- **New factories**, offices, stores and homes threaten to lock-in still more carbon emissions if they're not designed correctly.
- **Need to act immediately**, each year the task will get tougher. The amount of emissions reduction needed will rise; at the same time, the share of mitigation we can identify will fall.

Policy reform

The global community must overcome the collective action problems that have hobbled international climate agreements.

Strong financial signals are necessary to spark real collective action. Either through an emissions cap or other means, we must put a price on carbon to force businesses, consumers and governments to pay for their pollution.

FIGURE 8: Policy Spurs Carbon Markets



- **Carbon Price Tag** will in turn force the investment to shift towards cleaner solutions.
- **Carbon Cap** at home and abroad, new policies must limit carbon emissions from a wide range of sectors and activities. Calibrate emissions caps and targets to stabilize Co2 concentrations as close as possible to 450 ppm and limit global warming to 2 degrees Celsius.
- **Facilitate R&D cooperation** to accelerate the development, demonstration and diffusion of low-carbon technologies will allow industries and nations around the world to fulfill their obligations.
- **Promote supplier certifications** and “Carbon content” product labels to increase customer awareness and demand for manufacturer efficiency.

Concentrate efforts geographically

While USA and Europe are responsible for more than one-third of greenhouse gas emissions comparatively, China and India has much lower level of emissions, there is still time to influence energy investments and shape of booming mega-cities, where the greatest mitigation potential lies.

- **Role of Developed Nation:** Although developing nations offer some of the greatest mitigation opportunities, these countries cannot – and should not – shoulder the burden. Richer nations, which are the best equipped to deal with the effects of climate change, must help the most.
- **Target Global Economy:** Atmospheric science tells us that to stabilize CO2e levels at 450 ppm, we must reduce emissions by at least 30 gigatons in 2030. To achieve this mitigation must be found in every sector of the global economy.

Target five Key Sector

There are no silver bullets – we must simultaneously act on a number of fronts in each key sector: Power, Industry, Buildings, Transportation, Forestry.

To achieve our goal of reducing 2030 emissions by 30 gigatons, we must simultaneously search for mitigation opportunities in each of these sectors. Unless we reshape these building blocks of the world

economy, the Earth's climate will undergo its most rapid and profound transformation since the last Ice Age.

- **Power generation** is the largest source of emissions and the sector with the highest global mitigation potential – 6 gigatons.
- **Promote Alternatives:** Minimize the need for coal fired power plants, and promote alternatives, such as wind and solar energy plants.
- **Carbon Capture and Sequestration (CCS):** By the time wind, solar and other technologies are up to sufficient scale, the battle against global warming could be lost, hence CCS is a key solution to keep us in the game.
- **The industrial sector** threatens to cause both direct and indirect lock-in of new emissions sources. A factory is built to last, so an inefficient design will saddle the atmosphere with more carbon for decades to come.
- **To slash industrial emissions**, philanthropy should promote new standards and utility reforms that will motivate firms to design long-lived assets with energy in mind.
- **The building sector** – which accounts for nearly a fourth of 2030 emissions and offers 4 gigatons of mitigation potential – faces major lock-in challenges: Developers must pay extra to make buildings more efficient, but it's the occupants who reap the savings; similarly, landlords have little incentive to buy more efficient refrigerators or air conditioners if their renters foot the electric bill.
- **Transportation:** By 2030, the number of autos in China is projected to quintuple to 150 million; in India, a thirteen-fold increase is expected. Philanthropy must address vehicle efficiency, fuels and vehicle travel.
- **Urban planning:** Urban planning that causes city residents to depend on private vehicles – rather than bikes, buses, trains or their own two feet – amounts to a critical lock-in of carbon. Urban planning should include: mixed-use developments that co-locate homes, offices and shops; parking and congestion fees that discourage driving; more pedestrian-friendly cityscapes that encourage walking; and dedicated lanes for bikes and three-wheeled vehicles.
- **Forestry:** When a jungle is cleared for farming, grazing or development, the biosphere loses yet another vital “sink” where carbon is naturally sequestered. To add insult to injury, burning down a tropical forest liberates the carbon stored in the plants.

Our survey of the philanthropic field identified current annual funding of about \$200 million for climate issues, with only a portion devoted to the Design to Win priorities listed above. This amount pales in comparison to the \$3.2 billion U.S. foundations invested in health programs in 2004 alone, and the \$3.1 billion devoted annually to education.² Based on our interviews with climate and energy experts, we estimate that additional funding of about \$600 million is needed annually to implement Design to Win's strategies.

We recommend, in the broadest of terms, a three-part menu of investments:

1. Support existing NGOs with deep knowledge of local conditions and needed strategies; cultivate new organizations where necessary.
2. Create nation-specific expertise to facilitate grant making. Organizations that have the local capacity and expertise are needed to oversee highly leveraged, strategic interventions.
3. Build International Best Practice Centers for critical “don't lose” sectors to accelerate the diffusion of knowledge and innovation, either by establishing new institutions or linking existing organizations in loose networks.

Natural Gist:

- **Linking carbon markets and deforestation:** Based on the science, monitoring, policy prescriptions and lessons from pilot projects, we must facilitate the flow of international capital to the residents, land managers and government agencies that protect forests.
- **Facilitate R&D cooperation:** Accelerating the development, demonstration and diffusion of low-carbon technologies will allow industries and nations around the world to fulfill their obligations.
- **Improve international treaties:** Philanthropists should support efforts to include critical nations, such as the U.S., China and India, and crucial sectors, such as forestry, so that treaties have a tangible impact on emissions.
- **The Good News:** is that we already have the technology and know-how to achieve the carbon reductions upto 80%. The Key lies in rapidly deploying such technologies in our power plants, buildings, factories and vehicles, and improving land management practices.

- **Role of Philanthropy:** Philanthropy can play a pivotal role in this transformation. But donors and foundations must be strategic and choose interventions with the most potential to set the world on a low-carbon course.