

# Beyond Coal Campaign: A ngo/grassroots movement to stop global warming

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## INTRODUCTION

In recent years, global warming has not received the proper attention that it deserves despite severe warnings from Mother Earth, such as the super typhoon Haiyan that killed several thousand people in the Philippines and Hurricane Sandy that caused heavy damages in New York and the eastern United States. These violent storms and other effects of global warming have struck globally, rich and poor countries alike. Many leading experts have also warned about dire consequences if no corrective action is taken. The latest Intergovernmental Panel on Climate Change (IPCC) report issued in September 2013 confirms (at 95% confidence) that anthropogenic emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases are

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responsible for global warming. The IPCC report also projected that global average temperature and sea level would rise faster than predicted before.

The IPCC assessments are important because they form the scientific basis of United Nations (UN) negotiations on a new climate deal. Governments are supposed to finish that agreement in 2015. This is also the year when the UN Millennium Development Goals (MDG) called for reductions in CO<sub>2</sub> emissions and policies emphasizing environmental sustainability (Goal No. 7). However, it is very unlikely that governments would reach a new international agreement due to intense economic and political pressures. There exist deep divisions between rich and poor countries: the developed and developing countries are pointing the finger at each other and the poor ones blame everybody else!

In recent years, primarily due to the prolonged economic recession, there are some CO<sub>2</sub> emission reductions in developed countries such as the United States. However, these reductions are more than offset by rapid economic growth in developing countries such as China and India. In November 2013, the World Meteorological Organization (WMO) indicated that, if current emissions trends continue, the global average annual concentration of CO<sub>2</sub> will cross the 400 ppm threshold by 2016. Michael Jarraud, WMO secretary-general, also said that “*we need to act now, otherwise we will jeopardize the future of our children, grandchildren, and many future generations. Time is not on our side.*” A similar call for action has been issued by the ***Time to Act is Now – A Buddhist Declaration on Climate Change***. This declaration emerged from the contributions of over 20 Buddhist teachers of all traditions to the book entitled ***A Buddhist Response to the Climate Emergency*** that was published in 2009 (Stanley et al., 2009). It has been endorsed by several Buddhist leaders including the Dalai Lama and Thich Nhat Hanh and is available online at

[http://www.ecobuddhism.org/bcp/all\\_content/buddhist\\_declaration/](http://www.ecobuddhism.org/bcp/all_content/buddhist_declaration/). Some scientists have estimated that CO<sub>2</sub> concentrations

need to be brought down to as low as 350 ppm in order to avert dangerous effects of climate change (Hansen et al., 2008). The Dalai Lama has endorsed this 350 ppm level and has indicated that *“it is now urgent to take corrective action to ensure a safe climate future for coming generations of human beings and other species. That can be established in perpetuity if we can reduce atmospheric carbon dioxide to 350 ppm. Buddhists, concerned people of the world and all people of good heart should be aware of this and act upon it”* (Stanley et al, 2009, p. 273).

## BUDDHIST RESPONSE TO CLIMATE CHANGE

Global warming and its associated climate change have attracted widespread among Buddhists, since many Buddhist countries are predicted to suffer large detrimental effects such as violent storms, long droughts, and disappearance of low-lying areas due to higher sea level. The UNDV conferences have devoted entire sessions to global warming, e.g. the 2008 conference in Hanoi, Vietnam and the 2009 conference in Bangkok, Thailand (UNDV, 2009). Many Buddhist leaders and scholars have extensively discussed its causes and effects from the Buddhist perspectives and the appropriate Buddhist response. In a paper presented by the author at the 2008 UNDV conference, global warming can be understood based on the following basic Buddhist teachings (Tran et al, 2008):

The Four Noble Truths,  
The Eightfold Noble Path,  
The Three Poisons,  
The Middle Way,  
The Dependent Origination, and  
Buddhist Virtues

As shown above, the primary cause of global warming is the greenhouse gases emitted by the burning of fossil fuels, primarily coal, oil and natural gas. Fossil fuels are currently the primary sources

of energy in the world today, electricity from coal-fired power plants, gasoline for automobiles and gas for cooking or heating our homes. Despite warnings about the detrimental effects of climate change, the world is consuming them daily in greater amounts, especially in Western societies that encourage their consumption and waste, e.g. two or more large cars per family, color TV in every room... Due to the long economic recession, many are questioning this wasteful lifestyle. Unfortunately, it is the dream of millions of people in developing countries such as China and India, and even in poor countries like Vietnam. That is why global CO<sub>2</sub> emissions keep increasing despite some reductions in the US and other Western countries.

Thus, climate change is a form of suffering and greed is the fundamental cause. It is also caused by two other poisons: anger, and ignorance. Anger comes in the form of aversion to conservation and sustainable practices. Ignorance or delusion cause us to think the permanence of all things, to misuse natural resources and to ignore the serious effects of global warming, from severe storms and floods in recent years to submerged coastal areas due to sea level rise in the near future.

Global warming can also be studied by applying other basic Buddhist teaching: the Middle Way, the Eightfold Noble Path and the principle of dependent origination. Due to the three poisons, a person may adopt extreme positions, (1) he/she is not responsible for global warming or (2) he/she cannot do anything about it. As Buddhists, we should dwell neither in denial nor hopelessness, but should adopt a middle way and a pro-active approach. According to the Eightfold Noble Path, we should fully understand the causes and effects of global warming (right understanding) through our best efforts (right concentration), intentions (right intent) and wisdom (right view). We should investigate the wasteful habits and practices in our own life (right livelihood) and then apply the best solutions (right effort) and care for others and all forms of life on this planet (right mindfulness).

Finally, we have to realize that we live in an interconnected and interdependent world where anyone's actions, however small, will affect everybody else and the planet as a whole. In recent years, well-known Buddhist virtues such as compassion and loving-kindness have been proposed as response to global warming. These virtues, together with sympathetic joy and equanimity, are the fundamental qualities of a Bodhisattva which vows to work tirelessly to liberate all other sentient beings from suffering. Sentient beings include not only humans but also animals and the environment in general.

For an individual, pro-active measures are quite simple such as replacing incandescent light bulbs with compact fluorescent bulbs, plant shading trees around the house for absorbing CO<sub>2</sub> and cooling effects, drive less, use public transportation more, ride a bicycle or walk whenever possible, recycle newspapers and other materials. Eating less meat or becoming a vegetarian not only prevents killing animals but also substantially reduces CO<sub>2</sub> from raising cattle and other farm animals. These simple measures are not only environment-friendly but also good money savers. They only require a minimal change in the existing lifestyle and are consistent with a simple and frugal lifestyle recommended by the Buddha.

The above action is suitable at a personal level and requires the participation of millions and a long time to make substantial CO<sub>2</sub> reductions. There are still too many people who deny the occurrence of global warming or believe in a quick technological fix. Due to the urgency of the climate change crisis, what we need is a more collective action that focuses on stopping large sources of CO<sub>2</sub> emissions, e.g. the large-scale burning of coal for power generation. Below is a collective program organized by "enlightened" public citizens to stop new coal-fired power plants and retire existing ones in the United States.

## **THE BEYOND COAL CAMPAIGN IN THE UNITED STATES**

In the United States, fossil fuel companies, including coal mining, power utilities and oil companies, are among the largest corporations that wield enormous economic and political influences. Some of these companies have sponsored studies that deny the occurrence of global warming and climate change. Some political leaders are using these studies to block efforts in reducing CO<sub>2</sub> emissions. Realizing that policy changes will not be forthcoming, many non-government organizations (NGO) that serve environmental and public interests have started grassroots campaigns and legal challenges to stop coal mining, oil and gas development, and the burning of coal and other fossil fuels. One such campaign is the Beyond Coal Campaign by Sierra Club which is the largest environmental organization in the US with over 1,4 million members (Sierra Club, 2013).

The Sierra Club's Beyond Coal campaign started as a three-person campaign in 2002 and has quickly grown into a powerhouse effort that is changing the way America produces energy. In 2001, officials of the Bush administration met with coal industry representatives as part of a closed-door energy task force, to craft plans for a new "coal rush" -- the construction of 150 new coal-fired power plants. Had the industry prevailed in building these plants, the nation would have been locked into the use of 19th-century dirty fuels for the foreseeable future. The potential for entrepreneurs to develop wind, solar and other clean technologies would have been crippled. Working with local people in neighborhoods across the country, Sierra Club organizers began fighting Big Coal's efforts to push through these plants. Together, they achieved one victory after another.

The campaign aims to stop not only the construction of new coal-powered plants but to close out existing coal plants because many of these plants use outdated technologies, emit large amounts of CO<sub>2</sub> and do not comply with existing environmental standards. The ultimate goal is to replace them with renewable energy such as wind and solar. In recent years, these renewable sources have become much more competitive against fossil fuels.

The campaign has adopted the battle cry **“The best place for coal and other fossil fuels is to leave them in the ground”!**

The Beyond Coal Campaign of Sierra Club will significantly reduce CO<sub>2</sub> emissions from coal-fired power plants and replace these with clean renewable energy. Thus, it is fully consistent with Goal No.7 of the UN MDGs. Moreover, it addresses our concern for environmental justice since several poor countries such as Vietnam are not significant CO<sub>2</sub> emitters yet disproportionately suffer the disastrous consequences of climate change.

For the last several years, the author of this paper has collaborated with Sierra Club and other NGOs by providing technical analyses and expert witness in litigation cases against power companies. The Beyond Coal Campaign includes the following tasks:

Educate the general public about the causes and effects of global warming and climate change.

Inform the local residents near the coal plants about their pollution and health hazards. A coal plant emits several toxics that can cause cancer and other health problems for local residents. Most existing plants use outdated technologies and hence do not meet current environmental regulations.

Use non-violent means such as community meetings, hearings and petitions to put pressure on political leaders and power companies.

Perform technical analyses such as air quality modeling analysis to show that ambient concentrations due to plant emissions violate existing air quality standards, and emission control technology analysis to show expensive controls are required.

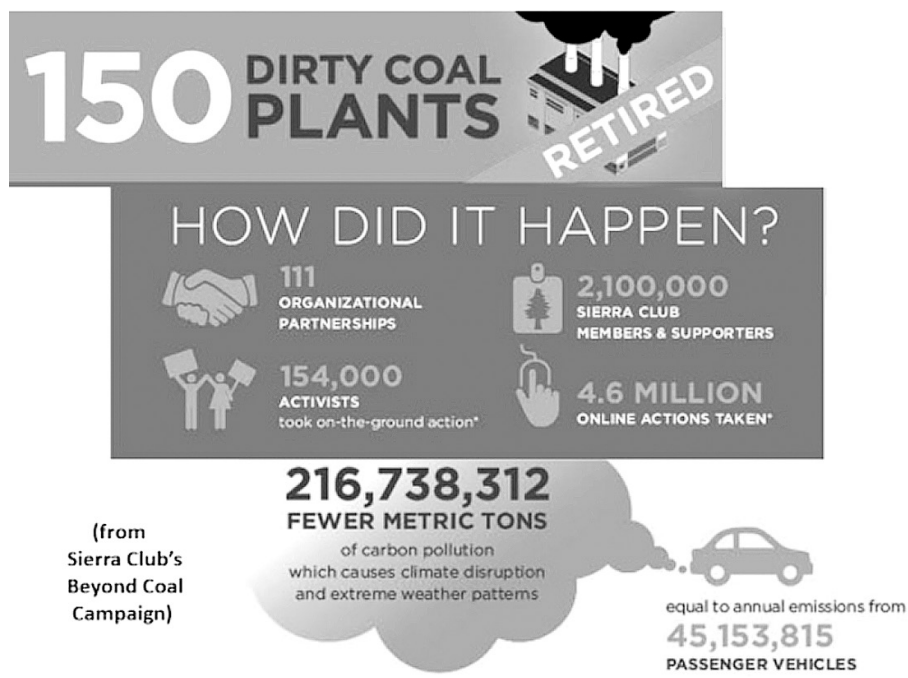
Use cost-benefit analyses to show the power companies that it is in their best interest to forego short-term profits by closing the coal plants and to convert to renewable energy such as wind and solar. In recent years, these renewable sources have become much more competitive with coal.

If power companies do not agree to plant closing, use legal challenges to put pressure on political leaders and power companies.

In the United States, Texas is well known for its dominance by big, powerful polluters such as oil and power companies. In 2011, Sierra Club requested the author of this paper to conduct an air quality modeling analysis of three large coal-fired power plants in northeast Texas. A July 2011 press release from Sierra Club states that *“the Sierra Club today released new reports indicating that three large, North East Texas coal-fired power plants owned by Luminant, formerly TXU, are single-handedly causing violations of federal air quality standards. The three East Texas coal plants addressed in the reports -- Big Brown, located in Freestone County, Monticello, located in Titus County, and Martin Lake, located in Rusk County, have a history of environmental problems ... The reports by Khanh T. Tran of AMI Environmental, show that the three coal plants are each modeled to emit SO<sub>2</sub> pollution at levels that are predicted to far exceed the federal standard - even without taking into account other background sources”*. A financial analysis also estimated that \$3.6 billion USD would be required to retrofit these Luminant power plants. And the Sierra Club press release concluded that *“TXU-Luminant should begin phasing out and retiring TXU-Luminant’s dirtiest coal plants – these plants are public health hazards and that is not acceptable -- nor financially viable. TXU-Luminant would do much better to strongly transition to clean energy.”*

The Beyond Coal campaign has received widespread support from the public and some political leaders. The ex- Mayor of New York, Michael Bloomberg, has donated \$50 million to the campaign. As of October 2013, the campaign has succeeded in closing 152 out of about 520 coal plants in the US. Retiring these 150 dirty and outdated coal plants will:

Remove over 216 million metric tons of CO<sub>2</sub> which are equivalent



to the annual emissions of 45 million passenger automobiles, save 4000 lives every year, prevent 6200 heart attacks and 66300 asthma attacks every year and, avoid \$1.9 billion USD in health costs.

## CONCLUSIONS

In response to the call for action by scientists and religious leaders, the Beyond Coal Campaign is a grassroots movement to retire existing coal-fired power plants and stop the building of new plants in the United States. It has succeeded in closing several power plants, helping both protecting public health as well as reducing CO<sub>2</sub> emissions. Eliminating CO<sub>2</sub> emissions from coal plants will go a long way in fighting global warming and its detrimental effects such as super storms, extended drought, sea-level rise... The campaign also focuses on replacing coal and other fossil fuels with renewable energy such as wind and solar. The use of clean, renewable energy will also bring about sustainable development that is one of the UN Millennium

Development Goals. The Beyond Coal Campaign represents a collective action that is compatible with Buddhist teachings and expresses the deep compassion of Buddhists towards all other sentient beings and the environment. It also addresses our concern for environmental justice, especially for countries that do not emit any significant amount of greenhouse gases yet suffer large effects such as Vietnam. It is hoped that NGO/grassroots programs similar to the Beyond Coal Campaign will soon be duplicated in other countries. Time for stopping global warming is running out and the time for action is now!

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