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INT-197XA

11 December 2012

Clean Coal: Myth, or Energy of the Future?

 “Big industry calls it the future. Al Gore suggests it’s a fantasy. Whatever the truth about ‘clean coal,’ consumers will be paying for it one way or another,” says Jeffrey Ball of *The Wall Street Journal*. There has been much debate over the subject of “clean coal,” especially in light of the recent presidential election. An efficient source of energy is required to save the environment—as well as the United States economy—but is coal the way to go? There are some arguments that support “clean” coal as an efficient energy source, but these are highly questionable and not supported by the *coal* hard facts.

 “Clean” coal has recently been in the spotlight as a debatable source of cheap energy, but by whose definition of “cheap?” In his article titled, “Coal Hard Facts: Cleaning It Won't Be Dirt Cheap,” Jeffrey Ball references a cost to the consumer, who could be paying for “clean” coal technology in one of two ways. Monetarily speaking, consumers will be paying more for their electricity. Since coal is a nonrenewable resource and is being used up by the minute, its value increases as more coal is mined. Additionally, the quality of the coal currently being mined is substantially lower than just ten years ago, so more coal must be mined to equate to the amount of energy once produced by the “same amount” of coal (Heinberg, 2009). Consumers could also find themselves paying for “clean” coal technology in the form of climate change and global warming.

 Kevin Grandia, Online Director for Greenpeace USA, addresses in *The Huffington Post* ten reasons why “clean coal is far from clean, and no amount of spin…is going to change that,” including that burning coal increases the rate of disease, decreases the potential for jobs in alternative energy, emits mercury, disrupts the climate even further, kills the coal miners, decreases the freshwater supply, pollutes seafood and freshwater fish, destroys mountains, and has become a waste of our government services, including lobbying and the endorsement of countless marketing advertisements to persuade consumers to blindly support this energy source. A recent study shows that “only fifty-six percent of every one thousand jobs promised by coal utilities actually materialize,” (Zeller, 2011). The emissions of mercury also pose a great risk to human health. According to the Agency for Toxic Substances and Disease Registry, “mercury in mothers' blood and breast milk can interfere with the development of babies' brains and neurological systems and can lead to learning disabilities, attention deficit disorder, problems with coordination, lowered IQ and even mental retardation.” Furthermore, the National Institute for Occupational Safety and Health estimates that 12,000 coal miners died from black lung disease between 1992 and 2002. Coal mining also requires seventy to two hundred and sixty millions of gallons of water every day (USDE, 2006), and recent coal extractions have required mountaintop removal to access the coal sources (Goodman, 2012). From these few facts, it is clear that the detrimental effects of burning coal largely outweigh the fact that coal is “abundant and affordable.”

The United States does, in fact, have an overabundance of cheap coal, which means that this seemingly limitless supply can be used as an energy source without an issue… for the time being. Although there is much coal available, it is a nonrenewable resource, and the current supply—as aforementioned—burns more quickly than earlier supplies have, and the United States’ supply is rapidly depleting at an alarming rate. In short, some believe that burning coal is better for the economy—although it may not be better for the environment. Economic figures obtained from both the Post Carbon Institute and the Environmental Protection Agency (EPA) clearly show that the price of coal doubled between 2006 and 2008. Most figures now have been distorted to illustrate a declining price of coal in the past four years, but this is only in light of the recent economic crisis, which has lowered the demand for electricity (Kishore and Snyder, 2012). It is also true that the recently proposed EPA regulations on burning coal could result in the loss of 1.5 million jobs—considering coal is currently the source of 550,000 United States jobs (ACCCE, 2012)—while becoming more dependent on “clean” coal could potentially create jobs. Although the recent EPA regulations have been depicted to potentially cause dramatic job loss, many people fail to recognize that jobs can be created with alternative energy sources as well, especially considering the fact that jobs in alternative energy have been steadily increasing (Dunn, 2006). Many environmentalists see “clean” coal as an oxymoron, some claim it is the only logical approach to address the pollution that this global community faces today. The issue with this “logic” is that it presents a short-term solution to a long-term issue: While burning coal seems to be the most convenient and inexpensive source of energy, it will only further harm the global community at large in the long run if it continues to be the prime source of energy.

There are a few processes supporters of the “clean” coal movement have made arguments for in order to make “clean” coal technology seem more efficient. Through a process known as Underground Coal Gasification (UCG), coal is ignited in the ground, then the gases that result from its partial combustion are collected and used. Unfortunately, UCG raises the risk of groundwater contamination, as well as subsidence, which occurs when the ground sinks or collapses over the area where mining has occurred. “Subsidence is inevitable with UCG because the supporting coal layer is being burned and removed as gases, leaving only residual ash and a void,” (Coil, 2010). There have also been talks of deliberately injecting carbon dioxide emissions from coal burning into the ocean. While this carbon dioxide would not reach the atmosphere for centuries, this process also comes with a great deal of risks, mainly including destruction of the oceanic ecosystems. Since these sea creatures have never been exposed to such intense levels of carbon dioxide, they would most likely not be able to adapt to these new conditions, and it is probable that a number of species would not survive, and inevitably become extinct (Caldeira and Akai, 2005). While these alternative solutions may *seem* viable, the number of risks entailed in both of these procedures are simply too great for implementation.

Burning coal has a number of detrimental effects that are not discussed in the many advertisements advocating for “clean” coal. According to Kert Davies, Research Director for Greenpeace USA, these advertisements—all backed by the American Coalition for Clean Coal Electricity in a $35 million advertisement campaign—rely heavily on the myth of “clean” coal, attacks on the Environmental Protection Agency, and appeals to xenophobia, or the fear of that which is foreign or strange, i.e. alternative sources of energy other than coal (Davies). According to Environmental Science, Law, and Ethics Professor Donald Brown of Pennsylvania State University, the entire campaign for “clean coal” technology is largely propaganda: distorted facts and exaggerated claims employed for the sole purpose of persuading consumers to support this detrimental technology with no regard for the environment:

This deception is classic propaganda because [it] presents facts selectively to encourage a particular synthesis, or uses loaded messages to produce an emotional rather than a rational response to the information presented...The clean coal [industry] has frequently engaged in propaganda that must be understood as lying by omission…about something that is potentially very harmful... (Brown, 2012)

The American Coalition for Clean Coal Electricity (ACCCE) has recently produced a
number of campaign advertisements supporting “clean” coal, and, according to Brown, these advertisements provide false and misleading statements that do not attest to any of the real dangers of burning coal for energy.

Not only are the statistics incorrect, but they also succeed in persuading consumers to support “clean” coal. Coal mining employment has decreased dramatically in recent years “from 126,000 miners in 1948 (who produced 168 million tons of coal), to just 15,000 miners employed in 2005 (who, with the help of machinery, produced 128 million tons of coal),” (Grandia, 2012), so the claim that coal mining creates jobs for the United States is also incorrect. The coal that is being burned now may be “cheap,” but, as earlier mentioned, it is also of worse quality than coal burned decades ago due to the “low-hanging fruit principle” utilized in the United States in which the higher quality resources are used up first (Heinberg, 2009). Essentially, the United States will have to burn a greater amount of this low-quality, nonrenewable coal, thus, in terms of basic economics, making this “cheap coal” more scarce and expensive, as opposed to abundant and cheap, which defeats the purpose of using coal as a source of energy in the first place.

There is one point that clean coal supporters are correct about: the United States already relies very heavily on coal as an energy source, and utilizing a new source of energy would require heavy turnaround:

Our nation will remain stuck on coal for the next several decades because we are so deeply invested in the coal industry and all that it supplies…Developments in China, especially, offer cleaner solutions with practical applications in the U.S… [which] offer faster, more affordable options that can essentially retrofit existing coal operations to make them less harmful and more efficient. (Nisbet, 2011)

Unfortunately, these developments are merely another short-term solution to a long-term issue. “Less harmful” is not acceptable when “harm*less*” is a possibility. Solar power, wind power, geothermal energy, and energy from biomass are all renewable energy sources, noted as the “way to a renewable energy future” by Coal is Dirty—a project managed by the DeSmog Project, Rainforest Action Network, and Greenpeace USA. Coal is a nonrenewable resource, and one of the greatest myths about “clean coal,” according to the Coal is Dirty website, is that “America has more than two-hundred years of available coal reserves,” which is simply not the case. In fact, most of the statistics on this “abundant resource” are based on studies and reports from the 1970s and 1980s, some of which are based on studies from as early as the 1920s and 1930s! There are a number of renewable resources—like those earlier mentioned—that pose very limited risks to the environment, and in this way, these are already more efficient alternative energy sources.

 The United States is incredibly dependent on coal as a source of energy. At this point in time, it would not be logical to propose that all coal-related projects be eradicated entirely, and this is where the widespread support of “clean” coal technology comes into play. These new policies being proposed and adopted offer a more efficient mode of burning coal for energy that is somewhat more environmentally efficient, but not entirely. Burning coal is detrimental to the environment, and this is a fact that cannot be overlooked. Coal is a nonrenewable resource, and the country’s supply will run out, especially due to its increasing low quality and high scarcity. Although “clean” coal technology is currently acceptable in that it is already so heavily implemented and comes with some convenience and affordability, it is only a short-term solution to a long-term problem. Many scientists contend that the concept of “clean” coal has been used as a marketing device—a ploy to mislead the community at large and persuade its members to support the movement.

All in all, the myth of clean coal is unrealistic at best, and continues to mislead consumers across the country. It is important for United States citizens to become educated on matters at hand, especially when discussing climate change and global warming. Moreover, it is crucial that citizens understand the severity of the planet’s warming, and just how dangerous the process of climate change is. Burning coal is only speeding up the process by polluting the air and freshwater supplies, mostly during the production procedure. There will be no “cleaner” solution other than to find and put into place a renewable, alternative energy resource that will eliminate the need for coal entirely, and although this cannot take place immediately, progress can be made in the alternative energy source arena. Burning coal does more harm to the environment and the economy than most people are aware of, and it is highly important that some action is taken to propel this nation on its way to becoming completely energy-independent.

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