FRACKING



READ THE EXECUTIVE SUMMARY

SIGN UP FOP LIFT THE FOG

Project Preamble

The Climate Change Leadership Institute (CCLI) and the Students for a Sustainable Future (SSF) in conjunction with numerous excellent partners are launching this project known as LIFT the FOG (standing for Launching Integrity & Facing Truth in Fracking Oil & Gas) which aims to shed light, raise public awareness and generate direct action on the need for responsible and sustainable fracking for oil and gas. We are not against the concept of fracking (indeed it can spur energy independence and could facilitate the use of limitless geothermal energy reserves) but we are opposed to fracking in reckless abandon in a way that jeopardizes human health and the environment. It is unacceptable to take for granted the water we drink, the Earth we inhabit, the air we breathe and the climate that sustains us. Therefore, our aim of this project is to properly regulate fracking to ensure that responsibility, sustainability and integrity are engrained into the process.

Hydraulic fracturing or fracking is a process in which millions of gallons of water mixed with sand and chemicals are injected at high pressure deep into shale and dense rock formations to extract natural gas and "tight" oil. This extraction practice has majorly contributed to a domestic oil and gas boom in America. So as we LIFT THE FOG AMERICA by instituting sustainable development in the fracking of oil and gas, the Climate Change Leadership Institute (CCLI) and the Students for a Sustainable Future (SSF) wish to make the following points and priorities absolutely clear from the outset:

- (i) **Developing our own energy resources,** including US oil and gas, is far better economically and environmentally than relying on imported oil from the Middle East and other unfriendly regions with whom entangled oil relations compromise our national security and integrity;
- (ii) **Conservation** however is without question the best way forward as a society so we must foremost temper our energy intake, become exponentially more efficient and be less wasteful;

- (iii) **Renewable energy** including wind, solar, geothermal, biomass (and other such sources) provides vastly more responsible power and electricity than any of the status quo fossil fuels;
- (iv) Human induced climate change has grave ramifications for our economy and well being, and **phasing out the emission of greenhouse gasses** must happen as soon as possible to protect the foundations of life and preserve civilization as we know it;
- (v) Until the United States as a leader of the free world incorporates and adopts these foundational principles into a coherent energy policy, and until the free market is transformed anew, we in civil society must help lead the transformation to a clean energy economy.

With these tenants in mind, we shall – as a preliminary step of the new era of responsible energy – commit to making the predominate fossil fuel economy itself cleaner by for starters ensuring that fracking for oil and gas is done more carefully and sustainably. Unless this happens, unless fracking is responsibly regulated and until the oil and gas industry definitively adopts complete sustainable development measures as set forth below, we collectively call for a nationwide fracking moratorium.

10 Vital Ways to Champion Sustainable Development in Oil & Gas Fracking

- (10) Tackle the extensive Greenhouse Gas Emission problems associated with Fracking The widely held notion that some fossil fuels such as natural gas are much cleaner than others like oil and coal deserves serious scrutiny. While natural gas emits less carbon dioxide in combustion than oil or coal, a recent study by Cornell University found that fracked natural gas wells leak methane (a more potent greenhouse gas than CO2) into the atmosphere. This, along with methane leaks in natural gas pipelines and distribution systems, plus other life cycle pollution issues, demonstrate that the greenhouse-gas and environmental footprint of fracked natural gas, as it is currently being done, is nearly as bad as that of oil and coal. The point is that fracked shale gas and all other intense greenhouse gas emitting fossil fuel development must rapidly be transformed or else face extinction as other genuinely cleaner and cost effective energies are adopted at scale (Amory Lovins in *Reinventing Fire* demonstrates that a transition to clean fuels can be made expeditiously in a most economically desirable way in the free market place).
 - → In this case of fracking oil and gas with its undue impact on climate change in the form of methane leaking we must for starters 1) learn the truth about this issue; 2) require companies to report methane leaks throughout the development process; and 3) ensure that the industry prevents, plugs and captures leaked methane from fracking wells and the gas (or oil) product's lifecycle. Doing so not only makes common sense it makes good business sense because there will be more methane preserved to be sold in the marketplace, used for transportation, etc.
- (9) Raise the integrity in America's oil and gas development "Tight" Oil and Natural Gas are currently being extracted and produced at unprecedented rates in the United States, which could be a good thing in terms of spurring economic development and energy independence. But the widespread extraction practice used known as Fracking or Hydraulic Fracturing is being

done with such reckless abandon and disregard for public and environmental health that this promising surge of domestic energy development is blighting our character as a responsible free nation. The oil & gas industry and elected officials doing their bidding have utterly failed to ensure and uphold standards of excellence in the field. Daniel Yergin with Cambridge Energy Research Associates acknowledges that "it's vital...these resources...be developed in a safe and transparent manner." Oil and gas fracking could be a beacon for 21st century innovation, a genuine race to the top, but instead it is playing out as a pollution emitting, truth concealing race to the bottom. America could and should lead the world in cleaner energy solutions including developing responsible fracking for oil and gas (and soon geothermal resources). This would mean practicing full disclosure, adhering to public health and environment standards and engraining cradle to grave pollution prevention technology into the process. Responsible fracking is not only the right thing to do but it would also lead to vast market opportunities within and beyond our shores whereby US energy companies could lead the world in the production of cleaner extraction technologies and sounder energy development practices.

- → We must stay up to speed on the ethics of the fracking industry, take targeted consumer-citizen action, and work to propel the powers that be the elected officials in our Nation, the oil and gas associations and conservation divisions in our states, the chambers of commerce in our communities in the direction of integrity. One way we do this is by stepping up as a citizenry and fairly shouldering the true costs of America's energy development and consumption instead of unjustly kicking the can down the road and piling the health and environmental cost burdens of our energy on the backs of future generations.
- (8) Build an ethic of Corporate Responsibility in the fracking industry The companies engaged in fracking for oil and gas should, given the growing synergy of self interest and the public good, lead the way in adopting standards of excellence in the development and production of these energy resources. Long term core business success depends on the production of a useful product that betters the world. A commitment to sustainable development – in this case by a near term investment in cleaner and safer fracking practices – leads to long term economy of scale price efficiencies and a dependable rise in a company's public relations standing. The leading energy companies engaged in fracking should act as stewards not pillagers and should embrace corporate responsibility. "Improved performance is a necessary prerequisite to improved public acceptance of natural gas development," said a June study by MIT's Energy Initiative. But the oil and gas industry as of 2012 seems hell bent on immediate profits and cost cutting even if the costs being cut and/or outright avoided are the costs to our health, environment and safety. The business model that externalizes these costs – unjustly imposing them on the public rather than properly internalizing them - is an unsustainable and unworthy business model which will implode as consumer pride, investor allegiance and public support dissipate. A vacuum of integrity exists, a fog over America persists, and a huge opportunity exists for the public to exert our leadership and for the oil & gas industry to practice corporate responsibility.
 - → A nascent movement is underway whereby <u>shareholders are calling for corporate responsibility</u>; **be part of it** and <u>see the many ways</u> including board level transparency, environmental compliance throughout the supply

chain, securing the consent of all key stakeholders in communities, etc. – that companies can **apply best practices**.

Environment – Since the oil & gas industry is not taking initiative to lead with integrity but rather is constantly lobbying for special exemptions and demanding special treatment, it's high time we the American people make them abide by the same sound rules of respect that all of the rest of us have to follow. The oil & gas industry currently gets waivers from the Safe Drinking Water Act (thanks to the capitulation of our elected leaders when they passed the 2005 Energy Act). The oil and gas industry's fracking activity is also exempt from the nation's Clean Water Act and Clean Air Act. Furthermore fracking is exempt from regulation and oversight on their now widespread practice of injecting back into the Earth the slurry of waste water and chemicals many of which are toxic that come up to the surface after the initial drilling and fluid injection. The list of exemptions goes on and on including exemptions from having to treat and deal properly with toxic and hazardous waste, Volatile Organic Compounds (VOCs) as well as exemptions from proper disposal and treatment of waste water.

- → Learn/get up to speed on the whole list of inexcusable exemptions;
- → Demand that the oil & gas industry abide by the Safe Drinking Water Act along with our other vital national standards of pollution prevention and human health protection just as everyone else does.

(6) Insist on Full Public Disclosure & Transparency – Fracking related contamination of drinking water is a prime example of the widespread problem of secrecy and the lack of truth telling that persists in this industry. There are many cases of alleged drinking water contamination from fracking. A Duke University study recently confirmed fracking related contamination of ground water in the form of methane, but the oil and gas industry dismisses this and other such allegations. There are two main reasons why there are not countless publically known cases of groundwater contamination: firstly is the lack of full public disclosure (for example all the many court cases which have been settled have sealed documentation as part of the settlements); and secondly is the lack of transparency, especially when it comes to the chemicals used in the fracking fluids. If all the chemicals and toxins were disclosed at the outset then we would know what water and air pollutants (beyond diesel exhaust) to test for in the areas where fracking takes place. We would know better the ramifications of injecting these chemically charged fluids into the earth to begin with and of re-pumping all the slurry waste back into the ground afterwards. Many allege that the toxins in the fracking fluid and/or in the waste slurry that is pumped into the ground will overtime naturally percolate to the surface and eventually contaminate our groundwater. The oil and gas industry alleges that the chemical content of the fracking fluid is proprietary information so it cannot be fully disclosed but that is just a way to avoid coming clean and ultimately avoid paying the true cost of this kind of extraction. Avoiding the truth means avoiding any requirements to mitigate, treat toxic waste and/or institute a responsible cycle of pollution prevention into the fracking process. It has already been determined that many of the chemicals used in fracking are known carcinogens, toxins and neurotoxins including benzene (which causes cancer and bone marrow failure), lead (which damages the nervous system and causes brain disorders), ethylene glycol (which can cause death), methanol (which is highly toxic), boric acid (which casues kidney damage and death), 2-butoxyethanol (which causes hemolysis). The 2011 US House of Representatives investigative report shows that of the 750 compounds in hydraulic fracturing products "[m]ore than 650 of these products contained chemicals that are known or possible human carcinogens, regulated under the Safe Drinking Water Act, or listed as hazardous air pollutants." There many ways beyond just the vital ground water issue that the oil and gas industry is not being truthful and transparent in regards to the effects of fracking. This tendency of non-disclosure is growing a toxic cloud of distrust across America. There are important economic benefits from fracking oil and gas but we need not be in denial about the negative impacts. Until we as a Nation face truth and mitigate impacts we are living in a fog.

→ It's time our Nation stopped being in denial about the dark side of energy development including fracked oil and gas and began making hard headed and realistic choices about the most responsible and effective ways to proceed. We as consumers should press for truth and boycott two of the largest oil & gas producers ExxonMobil and Chevron until they embrace full disclosure and apply best practices for fracking.

(5) Adopt Local~State~National Standards of Excellence

Local communities — Countrywide but especially in the northeast region (wherein lies the Marcellus shale) communities are weighing the local economic and landowner lease benefits of oil & gas fracking against the health and environmental impacts. While there is lot of wrestling over these issues, local communities are beginning to exert their self determination rights and claim home rule to ban or place a moratorium on oil and gas fracking in their localities. While the endeavor for local control is likely to lose many or most legal battles because of the predominance of the states' regulatory procedures of oil & gas, this self determination movement is becoming a major public relations challenge for the oil & gas industry and will not go away unless the industry takes responsibility.

→ <u>Learn more</u> and consider launching a fracking moratorium in your community until there is accountability for sustainable development.

The States – Take a look at the National Conference of State Legislatures' (NCSL) <u>state by state fracking report</u>. What you will find is not very encouraging: most of the state legislative attempts to responsibly regulate fracking oil and gas have been defeated or withdrawn and so a vast majority of the states are not ensuring the safe and sound fracking of oil and gas.

A notable exception and one of the best public disclosure laws for Fracking in the country is found in *Colorado*. Colorado's fellow citizens, public interest groups, Governor, state legislature and local industry with notable <u>leadership from the Colorado Oil & Gas Association</u> (OGAP www.coga.org) deserve a lot of credit for enacting the disclosure law. Indeed Colorado can boast some of the more responsible and comprehensive oil and gas fracking regulations in the country, and yet the oil and gas industry is still thriving there which should dispel the myth that regulations curtail development, kill jobs and hurt the economy. Quite often the opposite is true: an unregulated market often promotes a race to the bottom that eventually spawns chaos

and chronic uncertainty in the marketplace whereas a sensibly regulated market provides safeguards that promote trust, build certainty and forward long term sustainable growth.

→ Go to www.FracFocus.org to find out about the chemicals used in the fracking process at these public disclosure sites in Colorado and beyond and use the information to assess the fracking impacts at other non-regulated fracking sites around the country.

Compare Colorado with *New Mexico* and you see quite a different story.

- New Mexico just enacted the worst fracking related public disclosure law in the nation, one which the oil and gas industry initiated to create the perception that they are being proactive when in fact they are merely disclosing what they have to do anyway visa-vi a relatively insignificant federal procedure.
- New Mexico is repealing its Pit Rule which required the oil and gas industry to properly dispose in a secure disposal pit the slurry chemical and toxic latent wastewater that comes up to the surface in the process of fracking (the industry prefers to just pump that waste deep below ground out of sight & out of mind).
- New Mexico's relatively simple forms that need to be filled out (C101 and C108) for the
 permit to drill oil and gas wells and for injection wells (fracking is exempt from the
 injection related portion of these permits) can be approved or denied on a subjective,
 political determination.
- New Mexico's past laws (most notably in the 1965 Oil and Gas Act and an equivalent law enacted in 1978) reference regulation to protect against the contamination of fresh water and for the protection of public health and the environment. Yet any such regulation is left to the discretion of the Oil Conservation Division (OCD) which is an inherently political agency governed by whichever party controls the Governorship so there can be either more or less stewardship of oil and gas development and fracking depending on the whims of whoever is in power at any given time.

The point and problem is that the contamination of fresh water, the endangerment of public health and the pollution of the environment should not be left to the whims of whichever political party is in office or the discretion of industry itself. These rights of the public domain should be protected continuously and objectively by independent and competent enforcement and anyone prospectively intruding on these public rights, including the oil and gas fracking industry, should be responsibly regulated to prevent and/or mitigate their intrusive impacts.

→ New Mexico's citizens and leaders should unite to reinstate and preserve the Pit Rule, enact a legitimate public disclosure rule like what exists in Colorado and ultimately demand more responsible and sustainable oil and gas development instead of allowing the state to be trampled on by the industry.

A National Safeguard – Leaving the regulation of oil and gas fracking to the States is a recipe for disaster because all across the country today (as witnessed by the glaring contrast between Colorado and New Mexico) is a patchwork of good and bad regulation where there is no consistent safekeeping of our health and the environment.

- → We need national common sense standards of excellence in fracking, so that if States choose they may enhance them, but at least there would be a national safeguard and a basic overarching standard to adhere to.
- → We need to establish a National Permit process for fracking oil and gas that adequately safeguards human health, clean water and the environment.
- Our public lands leases for fracking whether these be through the state land offices or Bureau of Land Management (BLM) should ensure that if fracking is done on these our public lands that it be done sustainably and responsibly.
 - → To ensure safety and accountability, the fracking industry should not only be required to disclose the chemicals used in the fracking process and implement pollution prevention during the process but also be required to post a bond for clean-up of any unforeseen impacts in the aftermath. Beyond our public lands, the national associations of lawyers should endorse a concept of requiring pollution prevention/clean-up bond (aka "sustainable development bond") for oil & gas fracking leases on private lands.
- Earthquakes there is a growing concern about the link between hydraulic fracturing
 and the incidence of earthquakes which underscores a further compelling need for
 independent scientific research, federal oversight, the prospective need for more
 mitigation and better citing of fracking operations to avoid areas of seismic sensitivity.
 - → Ultimately, as in the case of all of these various and growing legitimate concerns referenced above and below, there is an utmost need for national standards/regulations of excellence in fracking oil and gas.
- Water Conservation Fracking oil and gas wells uses millions of gallons of water and
 this intense water use is expected to grow exponentially as this extraction practice
 expands. For areas like in the southwest United States and Texas which have been hit
 hard by drought the exorbitant water use of fracking poses increasing problems and
 pressures for a responsible public policy.
 - → There is growing need for stewardship. The fracking industry should be required to conserve and recycle the water it uses in its operations. In the new era or responsible energy we must turn to energies, extraction techniques, all development and delivery methods which minimize pollution and water consumption in order to be sustainable.

(4) Compel Jurisprudence –

The courts need to sort out, weed through and provide jurisprudence over the often contradictory web of laws and rights that exist when it comes oil and gas development and all undue impacts fracking may have on human health, safety, sovereignty and the environment.

→ Learn more about the extent of <u>lawsuits in the pipeline over fracking</u> and exercise your right to a cleaner future http://www.energyjustice.net/about.

(3) Demand Congressional Oversight –

The oil & gas industry must be sensibly regulated when it comes to fracking to ensure sustainable development. The United States Congress must do a much better job performing their primary function of oversight for the public good.

- → Enact the Frac Act which makes the industry adhere to the Safe Drinking Water Act, disclose chemicals used and other such sensible measures.
- → Improve upon the proposed Natural Gas Act to include ways to make the extraction of natural gas more responsible and sustainable per above.
- → Encourage your state's congressional delegation to ensure the sustainability, responsibility and transparency of oil & gas fracking.
- → **Vote** into office leaders with integrity who are not beholden to corrupting special interests go to www.lcv.org to learn more.
- (2) Call for Presidential Leadership we need to raise and/or elect a President who will among other leadership qualities act as the commander & chief of industry: (a) declaring the era of crony capitalism over and enacting the new era of responsible energy; (b) boldly and unabashedly fostering genuine free enterprise and innovation; and (c) holding US corporations accountable to excellence and integrity. President Obama moved in this direction in his 2012 State of the Union when he called on the natural gas industry to disclose the chemicals they use in fracking. However in his 2011 State of the Union he was mistaken to include natural gas as one of the "clean energies" our Nation should turn to in the long run. What he should do to be honest with the American people and encourage industry leadership is dangle the "clean" designation which comes with widespread incentives and free market support on the absolute condition that the gas industry: (a) respect and adhere to our nation's vital rules governing public health, safety and the environment; (b) capture and prevent leaked methane and (c) pay a surcharge for greenhouse gas emissions.
 - → Call the President at the White House at #202-456-1111 and advise him to support only clean, accountable, transparent, transformational and/or transitional domestic fracking for oil & gas and by doing so live up to the pledge and promise of his own inauguration when he called for "a new era of responsibility." Encourage the President to simultaneously wean off our foreign oil dependency (including staging a US led boycott of oil related transactions with the Iranian National Bank) and proactively transform to a clean energy economy (by locking in long term clean energy tax incentives as well as enacting an escalating national clean energy portfolio standard to speed the needed transition to clean and sustainable energy).
- (1) Take Direct Action Unless or until our elected officials and the fracking industry take meaningful action to implement best practices, minimize environmental impacts and interact transparently with the public, we as concerned citizens and the civil society at large in America must serve as sustainable development watchdogs, insisting on and taking direct action for a clean energy future. As consumers, voters, investors, business men and women, church goers perhaps, and as leaders in our community we together must commit ourselves to the cause at hand to ensure the fracking of oil and gas is done sustainably with integrity and responsibility for the public health, safety and environmental impacts.

Ways to get more involved in your local community, with your state, for our Nation:

- → Research and learn more information about the subject;
- → Collaborate with the civil society including with civic groups, churches, chambers of commerce and noble non-profit organizations (visit for example *Earthworks'* fruitful Oil & Gas Accountability Project at www.ogap.org);
- → Study the environmental health impacts and groundwater quality in places where fracking is going on in your own state; use the Frac Focus (www.FracFocus.org) information from Colorado to study for impacts in your neighborhood;
- → Form public partnerships with educational institutions, scientific organizations and health practitioners because with their technical capabilities we can improve upon monitoring, measuring and assessment of the public health, safety and environmental impacts of fracking oil and gas.
- → Sign up here to join us as a fellow citizen or partnering organization: LIFT THE FOG AMERICA
- → Use the new and old communication channels twitter, facebook, e-mail, word of mouth, letters to editors, neighborhood associations, etc. to share and grow this fracking related direct action project.
- → LIST LOCAL DIRECT ACTIONS going on in and around your community;
- → Always keep working to enact a clean power revolution and lead the new era of responsible energy in America @ www.takeresponsibility.us

Ultimately, unless fracking is responsibly regulated and until the oil & gas industry definitively adopts complete sustainable development measures, as outlined above, we are united & hereby call for a fracking moratorium.

READ THE EXECUTIVE SUMMARY

SIGN UP FOP LIFT THE FOG



For more information on the Climate Change Leadership Institute (CCLI) go to www.takeresponsibility.us or e-mail ccli@takeresponsibility.us.