



**2012 Policy Priorities:  
A Focus on the Ethics of Using Fossil Fuels**

## PEC 2012 Policy Priorities: A Focus on the Ethics of Using Fossil Fuels

*Empowered, however, by a just, good, and gracious God, we must resist the temptation of despair. Among the wealthy and powerful such despondency can be self-serving because it leads to moral paralysis. This “cheap despair” changes nothing and preserves the status quo from which the wealthy and powerful currently benefit. Empowered by God’s costly grace, we must work tirelessly with others as individuals, as a church, and as global citizens to live in harmony with the energy resources God has so abundantly provided.*

The Power to Change: US Energy Policy and Global Warming,  
2008 General Assembly

Presbyterians for Earth Care believes that the overarching environmental problem of our time is global climate change and that the issue requires strong federal climate policies. With a gridlocked Congress, progress in developing and enacting such policies is slow. The burning of fossil fuels is one of the largest contributors to global warming. The extraction, processing and transport of fossil fuels also contribute to global warming and to pollution of air, land and water. Today there is great need at the local, state and national levels for Christians to question and oppose entrenchment of fossil energy sources to fuel our economy, and those of other nations. Accurate accounting of the social costs of production, transportation, and location of terminals and pipelines for shipment of fossil fuels is vital in ethical energy decision making. In our time, this accounting is lacking and as Christians we are called to be a prophetic voice on fossil fuels as we embody in our lives and congregations a new energy economy based on energy efficiency and renewables.

The General Assembly (GA) of the Presbyterian Church (USA) has carefully considered the problem of global climate change in its 2008 GA document *The Power to Change: US Energy Policy and Global Warming*. It stands with an overwhelming majority of scientists who say that climate change is already happening and is caused by human beings. Actions to reduce greenhouse gases are needed now. The GA has also made renewable resources its choice among energy sources, also recommending reduced reliance on fossil fuels. Finally, the GA had adopted an ethic of ecological justice to guide its consideration of global climate change and its recommendations on energy. Four norms are identified in this Christian ethical model to guide the church: sustainability, participation, sufficiency, and solidarity.

PEC is concentrating on four specific energy problems within the larger context of global climate change, energy alternatives, and the four ethical norms for 2012. Toxics and environmental health and Genetically Modified Organisms (GMO) are of great concern and will also be addressed in our 2012 policy efforts, expanded upon in other documents. This document focuses on energy issues. Our position is summarized next to each energy problem.

1. **Hydraulic Fracking.** Place a moratorium on new fracking until human health and environmental impacts can be adequately evaluated by certified independent science. Put into place regulations that ensure that leaks of any fossil fuel gases are minimized from extraction, transportation and storage. (See Page 4)
2. **Mountain Top Removal.** Stop this practice immediately as the human and environmental impacts are well known and serious, in addition to its contribution to global warming. (Page 6)
3. **The Keystone XL Pipeline.** Do not permit due to impacts on Canadian First Nations and habitat, as well as other communities, water and land. The project also makes a tremendous contribution to global warming and pollution from the tar sands extraction, processing and finally burning of the fuel produced. (Page 8)
4. **Coal Export.** Coal Export. Call upon the federal government to study the environmental and climate impacts the establishment a coal export market on the West Coast using federally leased coal. Coal

from the Power River Basin of Wyoming and Montana, that would serve this export market, currently contributes about 14% of US carbon emissions and is one of the world's top coal reserves. The contribution to climate change from burning this coal is significant. Export terminals and the transportation of this coal by rail and barge would have also have adverse impacts on air, water, land, human health and local communities. Senator Ron Wyden (OR) wisely called for a timeout on coal exports in April 2012. The coal is federally owned and managed by the Bureau of Land Management, an agency of the Interior Department and other federal agencies may have roles. (Page 10)

Together with the four ethical norms, PEC is adopting the energy guidelines of the *Power to Change*. The committee has adopted its twelve ethical guidelines to evaluate energy options<sup>1</sup>:

- **Equity** concerns the impact of policy decisions on various sectors of society with special concern for the poor and vulnerable. Burdens and benefits should be assessed and distributed so that no group gains or loses disproportionately.
- **Efficiency** is the capability of an energy policy or alternative to provide power with the input of fewer resources. It also means frugality in consumption and a decrease in pollution. New technologies are essential to satisfying this guideline.
- **Adequacy** addresses the complex problem of supply. Policies and energy alternatives should be sufficient to meet basic energy needs. The meeting of basic needs takes priority until they are satisfied, then gives way to other guidelines, especially frugality and conservation.
- **Renewability** refers to the capacity of an energy option to replenish its source. Reliance on renewable sources should take priority.
- **Appropriateness** refers to the tailoring of energy systems to (a) the satisfaction of basic needs, (b) human capacities, (c) end uses, (d) local demand, and (e) employment levels. Energy decisions should lead to a variety of scales and level of technical complexity.
- **Risk** concerns the measurable potential of an energy policy or alternative to harm human health, social institutions, and ecological systems. Low risk options are preferable.
- **Peace** points to the potential of an energy policy to decrease the prospects of armed conflict. While international cooperation is essential to a sustainable energy future, energy dependence should be avoided to prevent disruption of supplies.
- **Cost** refers to monetary costs as well as other social and environmental costs. All costs should be included in the prices consumers pay for energy.
- **Employment** concerns the impact of a policy or alternative on employment levels, skills, and the meaningfulness of work. Policies and systems should stimulate the creation of jobs and new skills.
- **Flexibility** points to the capacity of policies and options to be changed or reversed. High flexibility is preferable, and systems subject to sudden disruption should be avoided.
- **Participation** and timely decision-making refer to the processes used to set energy policies and choose alternatives. Processes should allow for those affected to have a voice without leading to endless procrastination.
- **Aesthetics** points to beauty as one aspect of a flourishing life. Policies and alternatives that scar the landscape should be avoided.

When these guidelines are applied, it is clear that many fossil fuel proposals and projects have serious ethical deficiencies. PEC's Advocacy Committee provides the following background and analysis of each of the four

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<sup>1</sup> Source: <http://www.pcusa.org/media/uploads/acswp/pdf/energyreport.pdf> (Pages 13-14).

problems. We encourage PEC members to become informed on one or more of the issues, educate their congregation and others and to take action, including through presbyteries and General Assembly.

**General Resources:** The National Council of Churches Eco-Justice Program has a wealth of faith-based resources on energy ethics, global warming and a variety of energy issues. They include worship, sermon, study and action information. PEC especially commends the *2012 Earth Day Ethics of Energy Guide*. This and many other excellent resources may be found at <http://nccecojustice.org/resources/#climateandenergyresources>.

## Hydro-Fracking

By John Preston,  
PEC Steering Committee Member and Advocacy Committee Co-Chair

As a new technology, fracking provides a good illustration of how the accounting system of our political-economic system is rigged in calculating the balance of costs and benefits in justifying the social and economic good of energy technology.

The only costs counted in the marketplace are the costs of extraction, production, and distribution. What economists call “external costs” which are the uncounted social costs, are not counted in assessing the overall benefit of the technology. In the case of hydro-fracking, some of the costs NOT being counted include the following:

1. Road building and road maintenance for the heavy truck traffic,
  2. Management and transport of the fracking fluids that return to the surface,
  3. Water treatment costs, including building new infrastructure able to clean these fluids
  4. Public and private health costs from toxicity and radiation that cause illness
  5. Loss of green space and the ecological services provided,
  6. Loss of the historic and rural character of place and
  7. Costs related to the global warming and climate change caused by the unintended release of methane.
- Some of these costs can be estimated, but many of these costs are unknown.

Generally, the political-economic system socializes the costs, making the public pay through taxes and through degraded life-style and health. Yet, the benefits are privatized and flow to the wealthiest in our society.

Because shale gas is a fossil fuel that adds to greenhouse gas emissions it is not ultimately sustainable. Because it takes advantage of corporate domination in the market place it avoids the norm of participation. Because it socializes a hidden part of the cost of energy and privatizes profit it looks mainly to the sufficiency of the wealthy and violates the norm of solidarity with all peoples, and those people with the earth.

The policy stance of PEC is to place a moratorium on further fracking operations until the overall social and economic costs can be known and paid for by the industry, sufficient regulation can be deployed, and home rule (i.e. local government) participation guaranteed. Following the wisdom of the precautionary principle, PEC believes that the burden of proof of the harmlessness to public health, the environment, and local communities and municipalities should fall upon the industry. This burden of proof should meet certified independent scientific standards, prior to governmental regulatory permits to proceed with this technology. It is also the burden of government to assure that regulation of this technology is technologically sufficient, affordable, and effective.

An overarching step that needs to be taken in the natural gas industry to lessen its impact is to reduce leakage of methane. According to Natural Resources Defense Council, methane, a potent greenhouse gas which makes up as much as 90 percent of natural gas, is leaked or vented to the atmosphere when natural gas is extracted by hydro-fracking and other techniques, processed, and transported. Problems include poorly sealed equipment and losses during compression of natural gas. There are ten technically proven, commercially available, and profitable methane emission control technologies that could collectively capture 80 percent of the wasted methane emissions. The U.S. Environmental Protection Agency (EPA), other federal agencies, and the states should require use of these technologies for methane control.

## Resources

### Background:

- US Department of Energy 2009 Modern Shale Gas Development in the United States Primer - [http://www.rrc.state.tx.us/does shale/Shale\\_Gas\\_Primer\\_2009.pdf](http://www.rrc.state.tx.us/does shale/Shale_Gas_Primer_2009.pdf)
- Fracktracker, a clearinghouse of shale gas information. <http://www.fracktracker.org/>
- Fracking Resource Guide <http://frack.mixplex.com/fracking>
- Sourcewatch has a helpful history of fracking and policy background at <http://www.sourcewatch.org/index.php?title=Fracking>
- Study of drinking water contamination from fracking in North Carolina by Duke University . <http://www.propublica.org/documents/item/methane-contamination-of-drinking-water-accompanying-gas-well-drilling>
- Leaking Profits (reducing methane gas leakage), Natural Resources Defense Council, <http://www.nrdc.org/energy/leaking-profits.asp>
- Interfaith Power and Light Policy on Natural Gas Development and Hydraulic Fracturing. <http://interfaithpowerandlight.org/public-policy/>

**Organizations and Campaigns.** Note: Endorsement is not applied by listing in this section. These are starting places for PEC members to connect with local and national campaigns and are not exhaustive. Please e-mail PEC at [jehrestore@aol.com](mailto:jehrestore@aol.com) to let us know about campaigns you are involved with.

- Citizens Campaign for the Environment, Hydrofracking Center. (New York) [http://www.citizenscampaign.org/special\\_features/hydro-fracking-center.asp](http://www.citizenscampaign.org/special_features/hydro-fracking-center.asp)
- Earth Justice. [http://earthjustice.org/our\\_work/campaigns/fracking-gone-wrong-finding-a-better-way](http://earthjustice.org/our_work/campaigns/fracking-gone-wrong-finding-a-better-way)
- Center for Biological Diversity.(California). [http://www.biologicaldiversity.org/campaigns/california\\_fracking/index.html](http://www.biologicaldiversity.org/campaigns/california_fracking/index.html)
- Food and Water Watch. <http://www.foodandwaterwatch.org/water/fracking/fracking-action-center/>

## Mountaintop Removal (MTR)

By Sharman Chapman Crane,  
Member of the PEC Advocacy Committee; Kentucky Resident

Plainly stated, mountaintop removal is the extraction of coal by stripping the mountain of its trees, setting explosives in the rock, blowing up the mountain – sometimes up to 400 feet down to reach a four foot seam of coal. If there is another seam of coal further down the process will be repeated using over 5 million pounds of explosives every day. The blasted soil, rocks, everything living in the soil, and often the trees are bulldozed into the valley and streams and then compacted. Currently 72% of the Appalachian coal is being shipped to China.

The blasting releases trace minerals like selenium, arsenic, mercury, and aluminum in toxic amounts into our air and water. This is what we breathe. The burying of the streams destroys and poisons our waters. The southern Appalachian Mountains supply over 25% of the United States' surface water. Already over 2,000 miles of streams have been buried.

The coal corporations have been mining coal in Appalachia for over 100 years; surface mining for the past 50 years. Before the mining came in, we were considered the most self-sufficient people in the U.S. Today – the least self-sufficient with the poorest emotional health, physical health, highest mortality rates. We suffer higher rates of birth defects, heart disease, asthma, and auto-immune diseases. We have the highest drug abuse rate per capita in the nation. This type of mining requires 90% fewer employees and 50% of our people have left.

The water carries death. The air carries death. The land has lost its diversity. The people are losing their lives. Our young people struggle to vision a future here. The jobs have left. The people have lost their voices. There is great fear. The people have no options. Many have lost hope. MTR violates just about all of the twelve ethical guidelines, especially, renewability, equity, appropriateness, risk, flexibility, participation and aesthetics. A Commissioner's Resolution opposing MTR was passed by the 217th General Assembly of Presbyterians in Birmingham in 2006. EPA 's authority to regulate this devastating practice must be strengthened, not undermined as some in Congress are attempting.

### Resources:

#### Background

- Natural Resources Defense Council Fact Sheet, <http://www.nrdc.org/energy/coal/mtr/fmtr.asp>
- Full cost accounting for the life cycle of coal. New York Academy of Sciences, 2011.
- <http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/pdf>
- Surface Coal Mining Activities under the Clean Water Act, <http://water.epa.gov/lawsregs/guidance/wetlands/mining.cfm>

#### Faith Resources

- *Prayer and Preaching Resources on Ending Mountaintop Removal and Faithful Reflection Guide: Mountaintop Removal Coal Mining*, from National Council of Churches, <http://nccecojustice.org/resources/#climateandenergyresources>.
- Prayers and prayer requests by people of Appalachia. <http://ilovemountains.org/prayers>
- 217<sup>th</sup> General Assembly, Presbyterian Church, USA, Commissioners Resolution on Mountain Top Removal, <https://pc-biz.org/IOBView.aspx?m=ro&id=1359>
- Interfaith Power and Light Policy on Coal. <http://interfaithpowerandlight.org/public-policy/>

- Reflection on Women's Stories from the MTR and Climate Change Tribunal, by Rebecca Barnes Davies, <http://chej.org/2012/05/reflection-on-womens-stories-from-the-mtr-and-climate-change-tribunal/>

### **Organizations and Campaigns**

- Appalachian Voices, <http://appvoices.org/>
- Christians for the Mountains, [www.christiansforthemountains.org/](http://www.christiansforthemountains.org/)
- I Love Mountains.org is produced by the 13 members of the Alliance for Appalachia who have come together to use cutting edge technology to inform and involve Americans in their efforts to save mountains and communities, <http://ilovemountains.org/>
- Mountain Justice, <http://mountainjustice.org/facts/steps.php>
- Sierra Club Beyond Coal Campaign, <http://www.beyondcoal.org/>

## The Keystone XL Tar Sands Pipeline

By Jenny Holmes,  
PEC Advocacy Committee Co-Chair and former PEC Moderator

*Canada's tar sands, deposits of sand saturated with bitumen, contain twice the amount of carbon dioxide emitted by global oil use in our entire history. If we were to fully exploit this new oil source, and continue to burn our conventional oil, gas and coal supplies, concentrations of carbon dioxide in the atmosphere eventually would reach levels higher than in the Pliocene era, more than 2.5 million years ago, when sea level was at least 50 feet higher than it is now. That level of heat-trapping gases would assure that the disintegration of the ice sheets would accelerate out of control. Sea levels would rise and destroy coastal cities. Global temperatures would become intolerable. Twenty to 50 percent of the planet's species would be driven to extinction. Civilization would be at risk.*

Dr. James Hansen, New York Times, May 10, 2012

*"People of faith strongly believe that we need an urgent response to the climate crisis through continued implementation of better clean air safeguards, construction of a renewable energy grid, and more robust energy efficiency and renewable energy standards. The Keystone XL would only slow the pace of this clean energy transition, continue with business worse than usual, and hasten global warming. We can and must model a way forward for the world, create jobs, and care for God's Creation.*

The Rev. Sally Bingham, Interfaith Power and Light, January 2012

Tar sands are a combination of clay, sand, water, and bitumen, a heavy black viscous oil. Tar sands can be mined and processed to extract the oil-rich bitumen, which is then refined into oil. Canada has the only large-scale commercial tar sands industry and Alberta's Boreal forest, downstream for the eastern foothills of the Rocky Mountains, is its center. Currently, tar sands represent about 40% of Canada's oil production.

Approximately 20% of U.S. crude oil and products come from Canada, and a significant portion of this amount comes from tar sands. To extract all of the 2 trillion barrels of oil in tar sands, an area larger than the state of Florida would be destroyed.

TransCanada's proposed Keystone XL pipeline would transport heavy crude oil from Alberta's tar sands to refineries in the Gulf Coast. Most of this crude would be made into diesel and other products for export to Europe and Latin America. The argument that the Keystone XL pipeline reduces U.S. dependence on foreign oil is not valid. The best way to improve energy security is to reduce demand. A U.S. Department of Energy report found that the only way to reduce mid-east oil imports was through reducing demand through fuel efficiency. Rainforest Action recommends redirecting "the \$70-100 billion dollars the United States is set to invest in tar sands infrastructure into research and development of sustainable energy alternatives such as electric vehicles, plug-in hybrids, and solar and wind energy." PEC strongly agrees. The more invested in fossil fuel infrastructure of any kind, the less is available for development of sustainable energy and the harder, and more expensive, the needed transition to renewable resources will be.

Pollution from mining and processing tar sands is significant. The processing of tar sands releases air pollutants that can increase asthma and respiratory diseases, cancer and cardiovascular problems. Drinking water has been polluted by tar sands activity. First Nations people who derive subsistence from the land are disproportionately affected by the toxic products of tar sands mining and processing. Oil contamination has increased the level of arsenic to 33 times above acceptable levels in moose meat, a dietary staple for First Nations people.

A strong grassroots movement to oppose the Keystone XL pipeline, led by Bill McKibben's 350.org and Tar Sands Action was vital in President Obama's January 2012 rejection of it, at least in its original route. This route took it directly over one of the 174,000 square mile Ogallala Aquifer which underlies portions of eight

states from South Dakota to Texas and over the environmentally sensitive Sand Hills region of Nebraska. Other routes are now being considered, but much larger issues are at stake-- the most significant being the massive amount of greenhouse gases released by exploiting the tar sands. Climate change is a threat to national security and the U.S. State Department, the agency responsible for permitting the Keystone XL pipeline, knows this and it should figure significantly in its analysis. The U.S. State Department admitted in October 2011 that its environmental review of Keystone XL was conducted by a contractor paid by the pipeline company itself, a potentially illegal conflict of interest.

As with MTR, all 12 ethical guidelines are violated by tar sands mining, processing and transport. The guidelines of equity, efficiency, risk, cost and aesthetics are especially relevant.

## Resources

### Background:

- Dirty Oil Sands, [http://www.dirtyoilsands.org/thedirt/article/quick\\_facts/](http://www.dirtyoilsands.org/thedirt/article/quick_facts/)
- What are the Tar Sands? | Rainforest Action Network <http://ran.org/what-are-tar-sands#ixzz1uXOBEZJq>
  - Alberta Energy, Oil Sands, <http://www.energy.gov.ab.ca/OilSands/791.asp>
  - Environmental Impacts of Oil Sands Development in Alberta, <http://www.energybulletin.net/node/50186>
  - Death by a thousand cuts: Impacts of in situ oil sands development on Alberta's Boreal Forest, <http://www.pembina.org/pub/1262>
  - Tar Sand Pipeline Safety Risks, <http://www.nrdc.org/energy/files/tarsandssafetyrisks.pdf>

### Faith Based Resources

- Christian Faith and the Canadian Tar Sands, A KAIROS Reflection on Sustainability and Energy
- September 2008 <http://www.kairoscanada.org/wp-content/uploads/2011/08/Sus-TTS-08-09-ChristianFaithAndTarSands.pdf>
- <http://www.kairoscanada.org/wp-content/uploads/2011/08/Sus-TTS-10-07-DrawingLineSandLimitTarSandPositionPaper.pdf>
  - **Canada's Tar Sands and the Keystone XL Pipeline: What Faithful Texans Need to Know**
- <http://texasimpact.org/category/issues/environment>
- Religious Witness for the Earth, <http://rwearth.org/index.php?page=tar-sands-advocacy>

### Organizations and Campaigns

- Tar Sands Action, <http://www.tarsandsaction.org>
- 350.org

## Coal Exports

By Jenny Holmes,  
PEC Advocacy Committee Co-chair and Former PEC Moderator

When social and environmental costs are not considered, coal is the cheapest fuel for generating electricity in the United States, but coal industry plans of the past several years for a massive expansion of coal-burning plants for electricity have been thwarted. Increasingly, wind power is price competitive with coal. Citizen action and better regulation are also key reasons for a decline in coal consumption. According to the U.S. Energy Information Administration, domestic coal consumption during the fourth quarter of 2011 was down by 18.8 percent from the third quarter of 2011 to 227.1 million short tons.

Rather than allowing coal to stay in the ground, coal companies, see a growth opportunity in exporting coal, especially from the Powder River Basin of Montana and Wyoming. The plan is to transport it on long coal trains and massive cargo ships through Washington and Oregon, and sell it overseas. Some ports on the East and Gulf Coasts currently export coal overseas, but the proposals for West Coast terminals would exceed their volume. In April 2012, Oregon's Senator Ron Wyden stated that a "timeout" is needed on coal exports to consider the implications. PEC strongly agrees. The agency with federal jurisdiction over coal leases in the Powder River Basin is the Bureau of Land Management (BLM). Currently, there is no national policy on coal exports, but clearly the time has come.

The Powder River Basin (PRB) represents one of the largest coal reserves in the world. According to the BLM, coal from the PRB used in power plants accounts for nearly 14% of all U.S. carbon dioxide emissions. The nation's two largest coal companies, Arch Coal and Peabody, and the Australian-based Ambre Energy, are working on massive coal export terminals at Longview, WA and Cherry Point, north of Bellingham, WA. There are also potential proposals for many other communities, including: Grays Harbor, WA, Boardman, OR, Coos Bay, OR and St. Helens, OR.

Shipping up to a hundred million tons of coal a year to primarily to Asia through West Coast ports would spread toxic coal dust in rail communities and clog railroads and ports, disrupt traffic at at grade crossings, risk health, pollute air and water, and contribute to climate change. Trains will go through low-income and people of color communities already facing disproportionate environmental injustice.

Investment in infrastructure to ship strip-mined PRB coal through Northwest ports translates into decades of carbon emissions and toxic pollution from new coal plants across Asia built to take advantage of cheap coal. The pollution would come right back to the West Coast by winds across the Pacific Ocean.

Although new jobs are touted as a reason to export coal, committing shorelines, rail lines, and port communities to coal export would foreclose options for more robust and sustainable economic development. Also, the Northwest is known as a leader in sustainable energy and establishing the area as the center of US coal export flies in the face of that image.

Proposals to ship coal to Northwest communities to be burned in Asia are in conflict with with eco-justice norms of sustainability, participation, sufficiency, and solidarity and the 12 ethical guidelines. The guidelines of equity, efficiency, risk, cost, appropriateness and flexibility are especially relevant. By

further entrenching the use of coal through exports God's creation and God's people are put risk, especially the poor and vulnerable and future generations. The moral and spiritual costs of coal export are too high to move ahead without participation and consideration of all that is at stake.

Programmatic Environmental Impact Statements (PEIS), under the National Environmental Policy Act (NEPA) are needed to adequately assess the environmental and health impacts of coal export terminals and rail transport before any permits for building or expanding use of existing infrastructure are approved. A PEIS considers all of the cumulative impacts on communities and land. Federal policy around the use of coal from the Powder River Basin under the Bureau of Land Management and coal exports in general are called since impacts of coal export proposal are so significant.

## Resources:

### Background

- Northwest Coal Exports: Some common questions about economics, health, and pollution
- <http://www.sightline.org/wp-content/uploads/downloads/2012/02/coal-FAQ.pdf>
- Occupational Safety and Health Guideline for Coal Dust, U.S. Occupational Safety and Health Administration,
- <http://www.osha.gov/SLTC/healthguidelines/coaldust-greater5percent/sio2/recognition.html>.
- [U.S. coal consumption fell while exports increased during the fourth quarter of 2011](http://www.eia.gov/todayinenergy/detail.cfm?id=5990)
- <http://www.eia.gov/todayinenergy/detail.cfm?id=5990>
- William J. Bounds and Karen H. Johannesson, "Arsenic Addition to Soils from Airborne Coal Dust Originating at a Major Coal Shipping Terminal," *Water, Air, & Soil Pollution*, June 21, 2007, 185: 195-207, <http://www.springerlink.com/content/98146r1160021h13/>
- Energy Information Administration. Coal information. <http://www.eia.gov/coal/>
- Bureau of Land Management, Powder River Basin Coal, [http://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/PRB\\_Coal.html](http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal.html)
- Coal Train Facts, Information on the Proposed Bellingham, WA Cherry Point Terminal <http://www.coaltrainfacts.org/>
- Public Financing: Federal Fair Market Value Coal Leases in the Powder River are a Public Subsidy, Institute for Energy Economics and Financial Analysis Training: Financial, January, 2011 [http://policyintegrity.org/documents/6.1\\_Sanzillo\\_coal\\_lease\\_PDF\\_.pdf](http://policyintegrity.org/documents/6.1_Sanzillo_coal_lease_PDF_.pdf)
- Oregon Town Weighs a Future With an Old Energy Source: Coal
- <http://www.nytimes.com/2012/04/19/us/boardman-ore-considers-a-future-in-coal.html?pagewanted=all>

### Campaigns and Organizations

- Power Past Coal, [www.powerpastcoal.org](http://www.powerpastcoal.org)
- Sierra Club Beyond Coal, <http://www.beyondcoal.org/>

*When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.*

Wingspread Statement on the Precautionary Principle,  
January 1998

*Thanks to Dr. Bob Stivers for initial framing and drafting of the introductory section of this document*