



Fueling Our Future

Texans can have a healthy environment and reliable power...
but we have to act now.

Texas is at an energy crossroads. With the Texas population expected to double in the next thirty years, we will soon have many more homes and businesses that need electricity.

The energy debate in Texas reflects the national policy debate taking place in boardrooms and churches, at kitchen tables and on the internet. Forecasts by the U.S. Energy Information Administration (EIA) predict that Americans' electricity consumption will grow 45 percent in the next 24 years.

Across the state, policy makers, experts and ordinary Texans are debating how best to meet our future energy needs:

Should we rely on natural gas, which is relatively clean-burning but also increasingly scarce? Or should we cast our lot with nuclear power, which is both expensive and risky? What about "clean coal," which television ads tell us can be environmentally friendly after all? Or is there some way to shift more of our energy production to clean renewable sources like solar and wind power? And how much could we reduce our future electricity needs by investing in energy efficiency programs today?

But while citizens are talking, energy producers are charting a course for the whole state. Before we get any further down the road, it's imperative that Texans take ownership of our state's energy infrastructure—because like it or not, we will bear the costs of that infrastructure for the next fifty years or more.

In October 2005, Governor Rick Perry issued an executive order to "fast track" the permitting of new power plants for the state. The executive order requires the state agencies involved in power plant permitting to compress their normal 18-month permitting process into a six-month window. As a result, major steps—like modeling to see how the new plants will impact Texas' overall air quality and consideration of cleaner technologies—have been skipped.

Construction of the new coal plants is not inevitable. Texas has at hand a variety of better answers to its energy needs. Technologies exist that can reduce our



At precisely the moment that scientists have reached a consensus that we need to drastically cut climate-warming pollution, the electric-power industry is racing to build more than 150 new coal plants across the United States. Coal is by far the dirtiest fossil fuel: If the new plants are built, they will dump hundreds of millions of tons of carbon dioxide into the atmosphere each year for decades to come.

—*"Big Coal's Dirty Move," Rolling Stone Online, January 12, 2007, www.rollingstone.com/politics*

energy consumption and draw more of that energy from clean, renewable sources. Pursuing a "new energy future" would free Texas from much of its dependence on fossil fuels, allow the state to do its part to reduce global warming, create jobs, and safeguard Texas's

HOW WE GOT HERE

For much of the 20th century, utilities mainly attempted to meet increasing demand by building coal-fired power plants. For much of this period, there was little understanding of how power plant pollutants such as mercury, sulfur dioxide and soot could affect human health and the environment. And until the late 1980s, there was very little understanding of the impact of carbon dioxide emissions on the global climate. Today, we continue to grapple with the public health and environmental problems caused by those power plants, while ratepayers have been called upon to finance the installation of pollution control equipment to reduce environmental impacts.

During the 1960s and 1970s, utilities responded to projections of rapid demand growth by encouraging the construction of nuclear power plants. Despite initial promises that nuclear power would be “too cheap to meter,” nuclear power turned out to be an economic disaster, requiring well over \$100 billion in government subsidies, causing electricity rates in states that invested heavily in nuclear power to skyrocket, and saddling ratepayers with billions of dollars in capital costs which are still being paid off today. In addition, nuclear reactors have created more than 50,000 tons of toxic, radioactive waste and continue to pose significant threats to public health and safety.

In the 1990s, the answer was natural gas. The boom in natural gas power plant construction was in part predicated on the notion that natural gas supplies would remain cheap for the foreseeable future—just as coal is being portrayed as an infinitely available, cheap source of energy today. It didn’t turn out that way. In recent years, natural gas shortages and price spikes have reverberated throughout the economy. Natural gas prices have doubled in recent years, squeezing the pocketbooks of consumers and the profit margins of industry; both of whom have become increasingly dependent on natural gas for electricity, heat, hot water and as a raw material.⁶ Limited supplies of natural gas make it clear that drilling our way out of the natural gas crisis is not an option.

Now, the energy industry is turning back to coal. At first glance, coal appears to face none of the problems affecting natural gas. It is domestically available and relatively abundant. Compared with nuclear technology, coal-fired power plants have a simpler permitting process and do not produce dangerous radioactive waste. Hoping to take advantage of these perceived advantages, utilities and power generators are proposing to build a vast new fleet of coal-fired power plants across America.

As of June 2006, utilities have approximately 150 new coal-fired power plants on the drawing board, representing \$137 billion in investment and the capacity to supply power to 96 million homes.⁸ If all of these plants are built, it would increase America’s coal-fired generation capacity by nearly 30 percent.⁹ Plants have been proposed in 42 states.

future economic and homeland security.

The Texas Coal Rush

In April 2006, Dallas-based TXU Corporation announced plans for eight new coal-fired power plants in Texas, in



addition to three previously announced projects. In total, TXU plans to invest \$10 billion in 8,600 MW of coal-fired capacity. Together with seven other proposed coal plants, and one petroleum coke plant (similar to coal), some 19 coal plants are currently on the drawing board for Texas.

Construction of new coal-fired power plants on such a massive scale would extend Texas’ dependence on coal (most of which would be shipped in from Wyoming) for another half-century, with major impacts on Texas’s environment and economy. It would commit Texas to an enormous increase in global warming pollution; risk financial harm to individual power companies, ratepayers and the Texas economy; damage wide areas of land and foul water supplies with mining waste; and create health-threatening air and water pollution. Furthermore, staking Texas’s energy future on coal would consume billions of dollars that could otherwise promote more sustainable energy sources.

Global Warming

Global warming is starting to change weather patterns. Scientists predict that these changes will accelerate in the future and say that we can expect more heat waves, rising sea levels and increased severity of hurricanes in the Gulf of Mexico. In order to protect future generations and avoid the worst impacts of global warming, scientists estimate we need to reduce global warming pollution by 80% by the year 2050. Unfortunately, the proposed new coal plants would emit an additional 124 million tons of carbon dioxide a year, more than the individual emissions from 33 other states and 177 countries.

Health Damaging Air Pollution

The plants will also emit large amounts year of nitrogen dioxide, a major ingredient in the smog that plagues many Texas cities on summer days, mercury, a neurological toxicant that contaminates fish in rivers, lakes and the Gulf, and sulfur dioxide, a major ingredient in fine particle pollution, linked to premature death and respiratory and cardiovascular disease. According to a recent analysis, an estimated 240 Texans would have their lives cut short each year if the plants are built.

Environmental Damage

The environmental consequences of mining coal are just as negative as its adverse health effects. In 2004, coal mines reported the release of more than 13 million pounds of toxic chemicals to landfills or directly to streams, including emissions of ammonia, arsenic, chlorine, chromium and lead. Coal-mining waste, acids and toxic metals can kill stream life and make water supplies undrinkable. Water



Texas Air Pollution Emissions from Electricity Generation by Generation Fuel Mix, 2005

		NO _x	SO ₂	CO ₂	Hg	Spent nuclear fuel
	2005 share of Texas generation fuel mix	pounds per MWh			ounces per GWh	pounds per GWh
Gas	51%	0.7	0.0	1,219	-	-
Coal	32%	2.0	7.9	2,282	1.2	-
Nuclear	10%	-	-	-	-	9.9
Wind	2%	-	-	-	-	-
Biomass	<1%	2.7	0.4	217	-	-
Solar	<1%	-	-	-	-	-
Hydro	<1%	-	-	-	-	-

(percentages sum to less than 100% due to generation from minor sources)

Sources: Electric Reliability Council of Texas, "Statewide System Average Emission Rates, 2005" (<http://www.texasrenewables.com>) and U.S. Environmental Protection Agency, eGRID (<http://www.epa.gov/cleanenergy/egrid/index.htm>), on-line database



Stewardship, Justice and Respect for Life: Faith Perspectives on the Energy Debate

Environmental groups, local governments and a growing number of businesses are calling on the Texas Legislature to “Stop the Coal Plants” because the proposed plants would produce harmful emissions that would damage the environment, hurt human health, and put onerous new burdens on cities and counties already facing stiff federal requirements to cut air pollution.

But why would religious communities oppose new coal plants?

After all, we are told that coal is the cheapest way to meet the electricity needs of Texas’ growing population. Keeping the lights on is important to local congregations, and keeping electricity affordable seems like an opportunity to advance justice for the poor and needy.

The answer is that religious communities oppose the rush to build new coal plants because the plants, their pollution, and the permitting process itself fly in the face of core teachings of many faith traditions including the Abrahamic traditions. These teachings can be summed up as: Stewardship of Creation, Justice, and Respect for Life.

STEWARDSHIP of CREATION

The Lord God took the man and put him in the garden of Eden to till it and keep it.

—Genesis 2:15-17

The Hebrew scriptures teach us that God gave human beings a unique status among all the creation, and with that status unique responsibility to “till and tend” the Earth—to act as God’s stewards in caring for the creation and benefiting from its amazing abundance.

The call to stewardship is a call to action, to work proactively to preserve and nurture every part of the creation—to prevent destruction of what God created and called “good.” It’s also a call to

appreciation: stewardship means respecting the abundant gifts of God’s creation and making use of natural resources with humility and gratitude.

Increasing our reliance on coal-fired generation without first ensuring we are making the best use of existing power would be poor stewardship of creation for two reasons: first, it would be wasteful, and second it would be destructive.

Currently, Texas’ per capita electricity consumption is double that of California and New York. Yes, it’s extra-hot here; yes, we have energy-intensive industries. But “double” is more than just an adjustment for our unique circumstances. Before we build new power plants, we should be sure we aren’t throwing away the energy we already have.

New coal-fired generation would mean increased coal mining, which damages the land and water where the mining takes place. It would mean increasing transportation of coal from the places where it is mined to power plants, meaning loss of unspoiled land to rail and other transportation corridors. New coal-fired generation would require the use of water, diverting precious water resources that are needed to sustain life for people, animals and plants.

New coal-fired generation would pump tons of toxic chemicals into the air, making the air unsafe not only for people but also for other living creatures. Some of the air pollution ultimately becomes water-borne pollution that causes long-term destruction of entire habitats. And new coal-fired generation of the type being proposed in Texas would increase global warming pollution. Texas already leads the nation in global warming pollution, and the proposed new power plants would produce enough global warming pollution to more than offset all the recent emissions reductions California has legislated. Many denominations and faith traditions have formal statements

affirming the call to stewardship of creation. Visit www.texasimpact.org to see religious statements on caring for creation.

The national group Eco-Justice Ministries has published a very helpful preaching/teaching resource on environmental stewardship themes in the Book of Genesis. Find it at <http://www.eco-justice.org/Gen1-Index.asp>

JUSTICE

...they shall all sit under their own vines and under their own fig trees, and no one shall make them afraid; for the mouth of the Lord of hosts has spoken.

—Micah 4:4

Environmental injustice is a way of describing the disproportionate impacts of pollution and other environmental degradation on our neighbors—especially on the members of the human family who are least able to escape or cope with the damage. The processes of coal mining, transportation and combustion result in environmental injustice in Texas and beyond.

One of the greatest environmental justice concerns surrounding coal-fired generation is the injustice that coal mining has visited on communities throughout Appalachia. Several religious denominations have passed resolutions calling for an end to “mountaintop removal” mining because it exploits local communities to benefit corporate interests.

In Texas, concern for environmental justice focuses both on the communities where coal plants will be built and for communities “downwind” of the plants where residents disproportionately will suffer the impacts of coal plant emissions.

Environmental justice concerns extend to future generations and the world they will live in. A decision *for* a coal plant buildup is a decision *against* alternative energy strategies: once those plants are in place, there will be a tremendous incentive to maximize return on investment. Today’s toddlers will inherit responsibility for the proposed plants as well as responsibility for coping with the impacts of air pollution and global warming.

In a broader sense, the fast-track permitting process presents a justice concern for all Texans. Justice is about “right relationships” and ordering our interactions to honor the dignity and worth of every person.

The Governor’s order to “fast-track” the permitting process for coal-fired power plants undercuts the legislative process and Texas lawmakers, who set in law a permitting process they believed was fair to all Texans. Reducing the permitting timeframe constrains citizen input, and ensures that only “professionals” and individuals in privileged positions can participate in the process.

RESPECT for LIFE

Love your neighbor as yourself.

—Luke 10:27

“Protecting the environment is first of all the right to live and the protection of life.”

-- Pope John Paul II

Respect for life means affirming the sanctity of human life and working to preserve and protect it. Pollution from the proposed new coal plants would increase suffering, sickness and death for God’s children.

- ★ Air pollution is especially harmful to children because their lungs are growing and they are so active.
- ★ 2004 analysis estimated that there are 24,000 premature deaths, 550,000 asthma attacks, and 38,000 heart attacks reported each year due to pollution from coal-fired plants.
- ★ EPA’s consultants estimate that power plant pollution shortens the lives of 1,160 Texans each year and causes 196,149 lost work days.

Respect for life doesn’t just mean keeping people from dying: it means fostering a nurturing environment where human life can thrive, especially at its most fragile beginnings. The mercury emissions from the proposed coal plants would poison the environment for pregnant women and their unborn babies.

The proposed additional coal-burning power plants would annually emit into our air:

- ★ 120 million tons of CO₂ – contributes to global warming
- ★ 72,743 tons of SO₂ – causes acid rain and breathing impairments
- ★ 33,097 tons of nitrous oxides (NO_x) – forms smog, or ozone
- ★ 22,594 tons of particulate pollution (PM) – breathing impairment
- ★ 4,329 pound of toxic mercury – contaminates fish and leads to permanent brain damage in exposed children

While toxins like mercury present greater danger to some lives than others, global warming threatens all of human life indiscriminately. Coal-fired power produces more global warming pollution than other forms of generation—new coal power plants in Texas would push the whole world farther down a path of irreversible climate change.

For more information on air toxics and children’s health, see “Protecting Children in Their First Environment, the Womb” by Roxana Barillas, Project Administrator, Department of Social Development and World Peace, US Conference of Catholic Bishops. <http://www.usccb.org>



CHEAPER, CLEANER ALTERNATIVES TO COAL PLANTS

According to the Electric Reliability Council of Texas (ERCOT), the operator of most of Texas' electric grid, Texas electricity use is growing by 2.3% every year and in 2008 demand will exceed safe levels of supply. Governor Perry, TXU and other electric utilities argue that the new coal plants are necessary to meet Texas' growing energy needs and to avoid black-outs.

However, the proposed coal plants would supply much more electricity than ERCOT says Texas needs and they wouldn't be brought online in time to meet the power crunch. Fortunately, by implementing readily-available efficiency technologies we can meet these short-term energy needs and plan for Texas' long-term energy future at a far smaller cost.

Existing efficiency programs in Texas have resulted in a cumulative reduction in peak demand of 585 MW between 2002 and 2005 at a cost of about \$460 per kilowatt. By comparison, TXU estimates the costs of its new plants to be \$1,100 per kilowatt, which doesn't even include transmission, distribution and fuel costs. And while the earliest the first coal plant could be up and running would be 2009, efficiency programs can be implemented immediately.

Numerous technologies exist to reduce energy use in homes and businesses such as:

- ★ Home weatherization – including air sealing, insulation and window replacement – can cut energy use for home heating by 20 to 30 percent.
- ★ Efficient furnaces, like those meeting federal Energy Star standards, can cut energy use for heating by 20 percent compared to today's furnaces and by 40 percent compared to those 20 years old or older.
- ★ Solar and heat pump water heaters can reduce energy use for water heating by half to two-thirds, and more water-efficient refrigerators, clothes washers and dishwashers can provide additional savings.
- ★ Businesses can save energy, too. Wal-Mart, for example, has already committed to reducing its in-store energy use by 20 percent. And one recent analysis found that the use of more efficient motors and improved controls in the industrial, electric and commercial sectors could reduce total U.S. electricity demand by as much as 15 to 25 percent.

RENEWABLE ENERGY

In addition to efficiency, clean wind, solar, biomass and geothermal energy could meet all of Texas' energy needs. Already, Texas leads the nation in wind power and billions of dollars in investments will continue to grow that industry. According to the State Energy Conservation Office, if solar panels were distributed throughout 5% of urban areas (on building rooftops, over parking lots, along roadways), they would produce more than half of Texas' current electrical consumption.

Frequently Asked Questions:

Q: Why the rush?

A: The U.S. currently does not have a stringent federal emission standard for the output of carbon dioxide, which is bound to change in the near future. TXU and other utility companies are eager to build new coal-fired power plants before any new global warming pollution standards are implemented in hopes that once the plant is built, it will be grandfathered. Grandfathering exempts the plants from clean air laws.

Q: What are the impacts of Governor Perry's fast-track order?

A: Fast-tracking prioritizes the permitting process, narrowing the window for citizens and state officials to get involved by cutting the time frame for case hearings to six months instead of a year and a half. Fast-tracking furthermore minimizes the opportunity for alternatives as there is less time to draft solutions, analyze data, and project the impacts these coal plants could have on neighboring communities.

Q: What is the timeline for the permitting of the coal plants?

A: Most of the permits are expected to be voted on in March or April of 2007 by appointees of Governor Perry at the Texas Commission on Environmental Quality.

Q: What coal-related contributions has Perry accepted since becoming governor in 2000?

A: \$324,500. Perry has received \$132,000 since fast-tracking the proposal on October 27, 2005. Dallas-based TXU's political action committee donated \$35,000. Retired TXU chairman Erle Nye gave \$2,000 on Oct. 27, 2005 and \$50,000 since then. Nye has donated almost \$150,000 since Perry took office. Burlington Northern Santa Fe railroad gave \$40,000 after Perry's order to expedite the permitting process and \$71,000 total. The company would benefit from transporting coal to the new plants. San Diego-based Sempra Energy has donated \$5,000 since the proposal and \$12,500 total.

Q: Who is speaking out against the proposals?

A: Mayors from 17 cities, including Dallas Mayor Laura Miller and Houston Mayor Bill White organized the Texas Cities for Clean Air Coalition in opposition to the new coal plants. Their municipalities represent a combined population of 6.2 million or nearly 1/3 of all Texans. Environmental and business interests have filed lawsuits challenging the permitting process. Hundreds of Texas ranchers formed T-Power—Texans Protecting Water, Environment, and Resources—a group committed to fight the permits. And communities that would suffer the biggest impacts from the plants have formed local organizations that are participating in the permit hearings.

Q: Is it too late for the Texas Legislature to act to slow down the permitting process?

A: Lawmakers could pass a resolution calling on the agencies involved in the permitting process to hold off on issuing any new power plant permits pending a thorough review of the potential costs and benefits of coal-fired power, alternative generation options, and energy efficiency measures. Legislators also could pass other legislation that would implement immediate alternatives such as energy efficiency that would reduce or eliminate demand for the new coal-fired generation.

Q: Where can I find more information about the proposed coal plants?

A: "Stop the Coal Rush" (www.stopthecoalrush.com) is a clearinghouse website that includes links to all the organizations opposing the fast-track process, fact sheets, and information about upcoming local and statewide actions on the issue.

Texas Impact is an interfaith grassroots network that helps people of faith raise a voice of religious social concern to the Texas Legislature. www.texasimpact.org

Environment Texas is a statewide, citizen-based environmental advocacy organization. www.environmenttexas.org