

Coal Blooded: Putting Profits Before People in Ohio



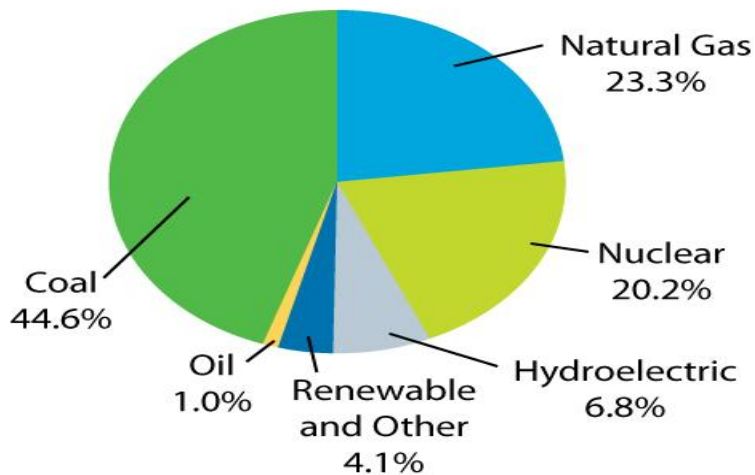
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“Fifty years ago, in industrial states such as Pennsylvania and Ohio, people were still dropping dead in the streets on days when air pollution was particularly bad. In China and India, they still are. But, the fact that most Americans no longer fear that pollution from a coal-fired power plants will kill them is a dangerous illusion. Pollution from coal, both the mining and burning of it, is still a major public health issue in the United States. Tens of thousands of people are still dying prematurely each year as a result of America’s romance with coal. But now it happens in slow motion and in ways that don’t translate easily to death certificates”.¹ –Jeff Goodell

America is hooked on coal — and that addiction has stayed unchanged in recent decades, at the same time as many other countries are moving towards cleaner energy sources. *In 2009, a full 44.6% of U.S. electricity came from coal-fired power plants* — and forty years after the Clean Air Act of 1972 was passed, America has failed to kick its coal addiction. While coal’s share in U.S. power production has decreased slightly in the past decade, it is actually slightly above its historic low of 44.2% in 1972.^{2 3}

U.S. Electricity Generation Fuel Shares 2009



Source: U.S. Energy Information Administration

Just ten states produced more than half the coal-fired electricity in the U.S. in 2005: Texas (7.3%), **Ohio (6.8%)**, Indiana (6.1%), Pennsylvania (6.0%), Illinois (4.6%), Kentucky (4.6%), West Virginia (4.5%), Georgia (4.3%), North Carolina (3.9%), and Missouri (3.8%). The ten smallest coal energy-producing states — Connecticut, Oregon, California, South Dakota, Hawaii, Maine, Alaska, Idaho, Rhode Island, and Vermont — produce a combined total of less than 1% of the nation’s coal-fired electricity.⁴

Our Dependence Coal is Harming Us—Especially Communities of Color

A 2000 report on power plant pollution found that *all power plants in the U.S. (both coal and other fuel sources) are responsible for 30,000 premature deaths, 7,000 asthma-related emergency room visits, and 18,000 cases of chronic bronchitis each year.*⁵ Out of all power plants in the U.S., coal power plants are responsible for 88% of SO₂ emissions and 85% of direct PM_{2.5} emissions; coal's share of these emissions totals indicates that *coal power plants alone are responsible for tens of thousands of these premature deaths each year.*

*Sulfur dioxide, or SO₂, is one of the main pollutants produced by burning coal. Immediately, SO₂ causes coughing, wheezing, and nasal inflammation. Longer-term, it can cause or increase the severity of asthma, which is widespread in communities of color. African-Americans are hospitalized for asthma at three times the rate of whites, and the death rate from asthma is 172% higher for African-Americans than for whites.*⁶ And this form of pollution is very closely linked to burning coal: *coal power plants alone produce 74% of all SO₂ pollution in the United States.*^{7,8}

Nitrous oxide, or NO_x, is another key pollutant produced by coal power plants, as well as many other sources; coal power plants produce 18% of all NO_x pollution in the U.S.^{9,10} NO_x increases the risk of respiratory disease in children; it also reacts with sunlight to produce *ozone (O₃), which, like SO₂, also increases the risk and severity of asthma, as well as causing coughing, wheezing, and shortness of breath. Again, communities of color are disproportionately impacted by asthma in comparison with white communities.*¹¹

*Fine particle pollution (PM_{2.5}) is created when SO₂ and NO_x particles react in the atmosphere; in addition, fine particles are emitted directly by coal power plants. This form of pollution is probably the deadliest: fine particulate pollution can cause premature death in people with heart or lung disease, as well as causing chronic bronchitis, irregular heart conditions, and aggravated asthma.*¹² In addition to producing 74% of SO₂ pollution and 18% of NO_x pollution in the U.S. (which react to produce PM_{2.5}), coal is responsible for 85% of direct PM_{2.5} emissions from U.S. power plants.^{13,14}

The top ten coal-energy-producing states referenced above have an average lung cancer rate of 98.3 per 100,000 (or 19% higher than the U.S. average); the bottom ten states have an average lung cancer rate of 77.2 per 100,000 (or 6.6% lower than the U.S. average).¹⁵

As this report clearly shows, *coal power plants tend disproportionately to be located in low-income communities and communities of color.*¹⁶

- A total of 8.1 million Americans live within three miles of a coal power plant.
- Those 8.1 million people have an *average per capita income of \$18,594 – significantly lower than the U.S. average of \$21,587.*
- Out of those 8.1 million people, 36.3%, or 2.94 million, are people of color — a figure that is significantly higher than the 29.2% proportion of people of color in the U.S. population as a whole.¹⁷ Moreover, as this report reveals, *the coal plants that have been built within urban areas in the U.S. tend overwhelmingly to be located in communities of color.*

Coal and Climate Change: Cooking the Planet and Jeopardizing Its Inhabitants

Carbon dioxide, or CO₂, is the main cause of global warming — and coal is the world’s most carbon-intensive fuel, meaning that coal power plants produce more CO₂ per unit of energy than any other energy source.¹⁸ *In 2006, coal-fired power plants in the United States alone produced 1.94 billion tons of CO₂ — 32% of total U.S. CO₂ emissions, and almost 7% of total world CO₂ emissions. To put this in perspective, coal power plants in the U.S. emitted more CO₂ in 2006 than the total amount that was emitted by all sources in all countries in Latin America and the Caribbean.*^{19 20}

As Hurricane Katrina and the most recent tornadoes and flooding have already vividly demonstrated, the shifts in weather patterns that global warming causes also disproportionately affect communities of color in the United States — which is a particularly bitter irony, given that the average African-American household emits 20% less CO₂ per year than the average white American household. The six states with the largest proportion of African-Americans are all in the Atlantic hurricane zone, and all are expected to experience more severe storms as a consequence of global warming. Adverse weather events will also cause more severe impacts for communities of color, due to their more marginal economic situation: the median wealth of African-American households is one-tenth of that of the white households, leaving African-Americans with fewer resources to fall back on when disaster hits. African-Americans and Latinos are also far less likely to own health or homeowners’ insurance, and are consequently more vulnerable to having their entire wealth wiped out by a hurricane or other natural disaster.²¹ On an international level, it is also likely that pressures created by global warming in other countries, such as increased drought and diminished agricultural yields/crop production, will lead to increased migration to the U.S., which could lead to increased criminalization of and discrimination against immigrants.

Availability and affordability of nutritious foods are linked to agriculture production and markets, which are impacted by climate change which negatively impacts weather pattern dependent agricultural yields. In the US, already many African American and Latino children live in “food deserts” According to a 2008 study, availability of supermarkets in African American neighborhoods was 52% of their prevalence in white neighborhoods.²² Another study found that in census tracts where African Americans live within a mile of a supermarket, their intake of food and vegetables increases by 32%.²³ According to a study based on data from the USDA and the Nielson Company, over a third of the 44 counties in the US that fall into the highest category of food insecurity have majority African American populations. One in 4 African American households is food insecure.²⁴ African American and Latino children are also more likely to suffer from obesity, according to the American Obesity Association.²⁵ Childhood hunger and obesity can limit children’s growth, restrict brain development and reduce immune function (thereby increasing illness rates).²⁶ Later in life, obesity is well known to lead to diabetes, high blood pressure, heart disease, etc. The Food Research and Action Center reports that food-insecure children are more likely to be tardy or absent from school. They further state that insufficient food also negatively impacts children’s ability to interact with others and his/her surroundings.²⁷ Hunger and obesity are linked to lack of access to affordable, nutritious foods and will be exacerbated by the shifts in agricultural yields that result from climate change.

The disproportionate impact of climate change on communities of color is a secondary result of the emissions from coal fired power plants on top of the direct assault through the pollution that communities ingest daily.

Ranking the Coal Fired Power Plants That Are Most Harmful to Communities

Not all coal plants are created equal. The effects of some plants on low-income communities and communities of color are far, far worse than others. This report focuses on the coal plants in the U.S. with the worst scores on environmental justice, and the companies that own them.

Following this argument, the core of our report is a systematic study of 431 coal-fired power plants in the United States, in which we assign each plant an Environmental Justice Performance ‘score,’ a relative ‘rank,’ and a ‘grade’ based on its effects on low-income communities and communities of color. We then used the same methodology to assign a Corporate Environmental Justice Performance ‘score,’ a relative ‘rank,’ and a ‘grade’ to sixty leading U.S. power companies, based on the effects of those companies’ coal-fired power plants on low-income communities and communities of color. The score assigned to each plant, and each company, is based on five factors: SO₂ and NO_x emissions; the total population living within three miles of the plant(s); and the median income and percentage people of color amongst the total population living within three miles of the plant(s).

In many ways, this report builds on the information first presented in “Air of Injustice,” a 2002 report authored by the Black Leadership Forum and several other organizations.²⁸ However, this report differs from “Air of Injustice” in that it provides a detailed ranking of individual coal plants; in that it includes income as well as race as a ranking factor; in that it ranks companies owning these plants, rather than just the plants themselves; and in that it uses census-block-level data, which is much smaller-scale than the county-level data used in “Air of Injustice.”

It is important to emphasize that this report is *not* a ranking of coal power plants based on the overall toxicity of their emissions — in other words, **the fact that a particular plant receives a grade of F does not mean that it is necessarily one of the ‘dirtiest’ coal plants in the United States.** Numerous existing reports and studies (most notably, the Environmental Integrity Project’s “Dirty Kilowatts” reports²⁹) score coal power plants based purely on the toxicity of each plant’s emissions. This report is an ‘Environmental Justice Performance’ ranking: it uses a complex algorithm, combining levels of SO₂ and NO_x emissions together with demographic factors, in order to calculate each plant’s score, ranking, and grade. For example, many of the plants with grades of F are relatively small, but are sited in densely populated areas with high proportions of low-income people and people of color; conversely, many of the plants with grades of A are relatively large, but are sited in sparsely populated areas with low proportions of low-income people and people of color.

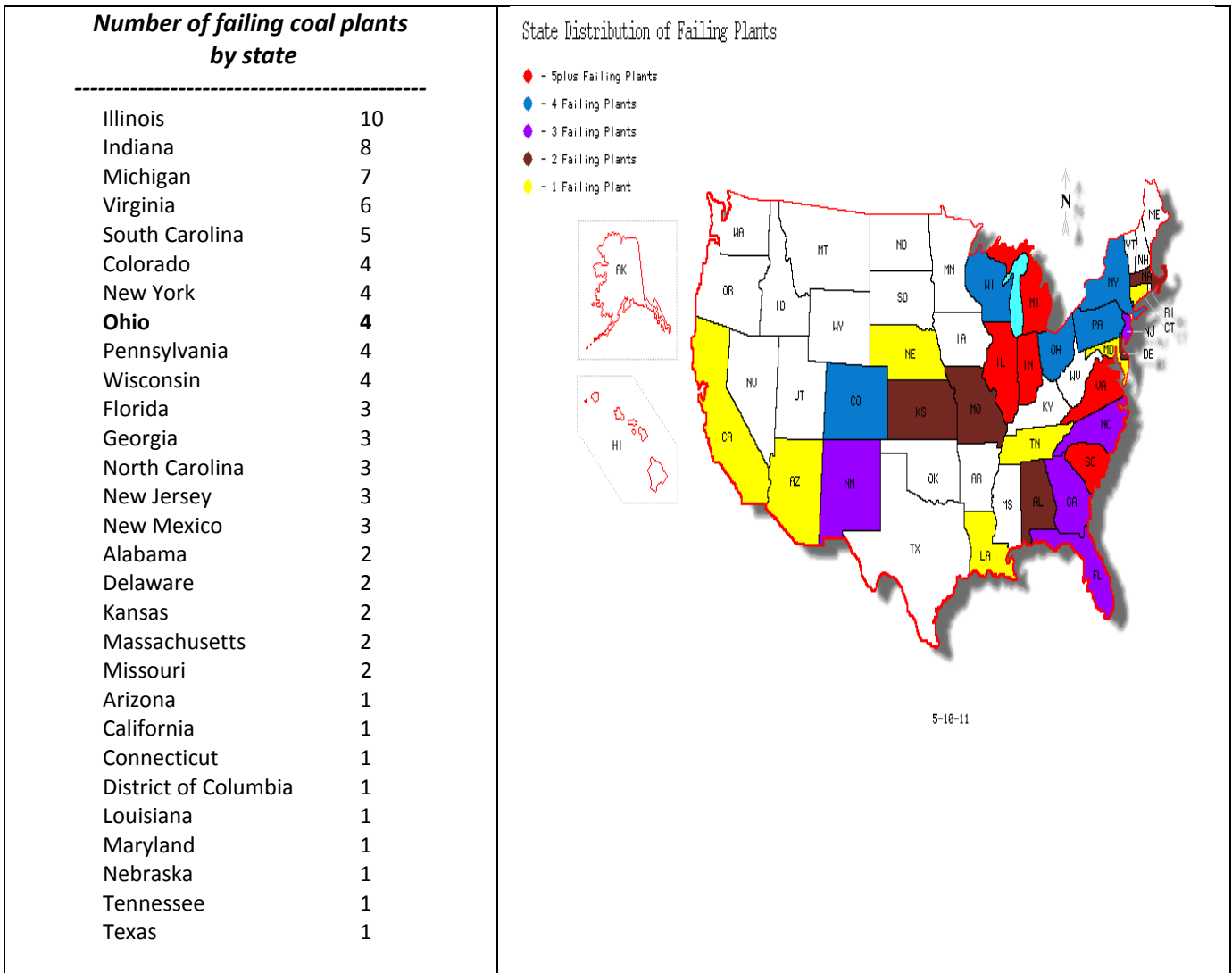
Also, we did *not* include CO₂ emissions as a factor in our rankings. This is for two reasons: (1) because, unlike pollutants like SO₂ or NO_x, there is no viable way of limiting the amount of CO₂ that is emitted when coal is burned, and thus each coal power plant’s CO₂ emissions are simply a function of the plant’s size;³⁰ and (2) because, while CO₂’s effects are mainly on the planet as a whole, SO₂ and NO_x primarily affect communities in the area around the power plant, making SO₂ and NO_x more relevant pollutants than CO₂ for the purpose of environmental justice calculations.

Finally, the fact that we assigned a particular plant an Environmental Justice Performance grade of A does not mean that that plant has no detrimental effect on public health, or on low-income communities or communities of color. These grades are relative, and only score individual plants in relation to one another.

The 90 'Failing Plants'

In our ranking (see Appendix 1 for the complete ranking), 90 plants earned an Environmental Justice Performance grade of F. These 90 'failing plants' produced only 9.2% of U.S. electricity in 2005 (375,552 GWh), but they were responsible for 25.5% of SO₂ emissions and 21.1% of all NO_x emissions from all U.S. power plants.^{31 32}

These 90 failing plants have a significantly disproportionate impact on people of color and low-income people. A total of 4.7 million people live within 3 miles of these 90 failing plants. The average per capita income of these 4.7 million people is just \$17,600 (or 25% lower than state average), and out of these 4.7 million people, 52.5% are people of color.



The 'Top Twelve EJ Offenders' Nationwide

Out of the 431 coal-fired power plants that we examined in this study, the following twelve had the worst environmental justice scores:

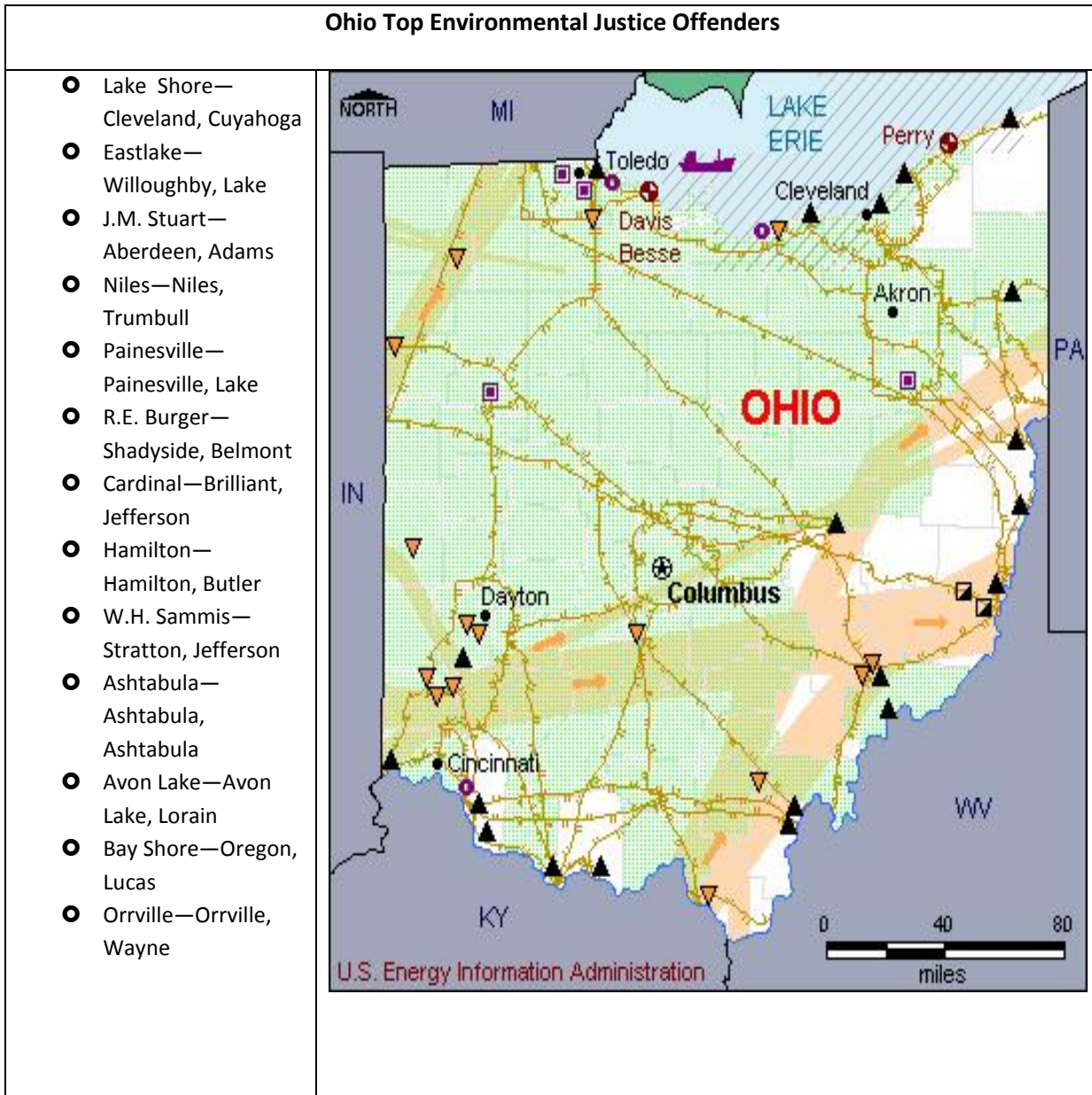
1. Crawford Gen. Station, Chicago, IL (Edison International)
2. Hudson Gen. Station, Jersey City, NJ (PSEG)
3. Fisk Gen. Station, Chicago, IL (Edison International)
4. Valley Power Plant, Milwaukee, WI (Wisconsin Energy)
5. State Line Plant, Hammond, IN (Dominion)
6. **Lake Shore Plant, Cleveland, OH (FirstEnergy)**
7. R. Gallagher Gen. Station, New Albany, IN (Duke Energy)
8. Bridgeport Station, Bridgeport, CT (PSEG)
9. River Rouge Plant, River Rouge, MI (DTE Energy)
10. Cherokee Station, Commerce City, CO (Xcel Energy)
11. Four Corners Plant, Niihahnízaad, NM (Arizona Public Service Co.)
12. Waukegan Gen. Station, Waukegan, IL (Edison International)

These 12 plants produced a total of 48,582 Gigawatt-hours (GWh) of electricity in 2005 — only 1.2% of total U.S. electricity production.^{33 34} A total of 1.78 million Americans live within 3 miles of one of these 12 plants; the average per capita income of these 1.78 million people is \$14,626 (compared with the U.S. average of \$21,587), and 76.3% of these 1.78 million people are people of color.

Ohio—Host to 11 of the Top Environmental Justice Offenders

Though we emphasize the plants with a score of “F” in our ranking above, the plants that scored a “D” are hazardous as well and the impact of emissions from the coal plants in those communities is significant. There were 168 plants that scored a D+ or worse. So as we examine prospects for state level action at the most troubling facilities, we’ve highlighted all plants in this low scoring category.

In Ohio, the map of the most toxic coal plants in populous areas paints a picture of quite a few facilities throughout the state that are wreaking havoc with the health and wellbeing of communities.



*Black triangles denote locations of coal fired power plants.

Cleveland-- Living in a Cloud of Coal Fumes

Cleveland is the unfortunate host to plant # 6 of the top twelve offenders in our list of toxic plants. We've included the data we've used in our analysis below, as well as some firsthand accounts from community members living near the Lake Shore Plant:

Lake Shore Plant <i>Cleveland, OH</i> Owner: FirstEnergy
Capacity: 256 MW
Built: 1962
2005-08 average SO₂ emissions: 3,911 tons*
2005-08 average NO_x emissions: 1,804 tons
Residents within 3 miles: 103,333
Average income within 3 miles: \$10,866 (51.7% of Ohio average)
People of color within 3 miles: 90.6% (85.0% African-American)
<i>*Since the last data collection for the Lake Shore Plant, First Energy has reportedly reduced the level of production at this plant. Given this reduction, presumably, the next release of data monitoring results for the 2008-2011 period will reflect a different level of emissions.</i>

Lake Shore is located in Glenville, an overwhelmingly African-American neighborhood in East Cleveland; the plant is within a band of East Cleveland that is over 85% African-American. Glenville is one of the poorest neighborhoods in a city that has undergone massive post-industrial decline.³⁵

There are six schools within a mile of the plant, and a large park with youth athletic facilities is immediately across the street.³⁶

St. Clair Superior – has the [highest childhood lead poisoning rates in Ohio](#), and perhaps America, at around 35% of children testing with elevated blood levels of lead in excess of 5 micro-grams per deciliter. Based on an online risk assessment tool accompanying the September 2010 Clean Air Taskforce study [The Toll From Coal](#) shows citizens of Northeast Ohio have the worst level of mortality from coal fired power plants in America.

“We grew up in this area [around the Lake Shore plant]. My brothers all played baseball, and we have baseball diamonds in this area... Families would come out and have picnics [in the area around the plant]. We never knew about the toxic waste that was coming from the coal plant. ... This plant is right in the midst of the black community. And the fact that no one has made us aware of what is going on — not our elected officials, not our community leaders — you don't hear anything about it. And it's killing our community.

“We need to find out: what is this toxic waste doing in our community? What's it doing to our families, and to the children? We know we have high incidence of all kinds of health issues that could very well be stemming from this plant. And we need to know that. We need to figure that out, so we can start getting

people prepared to start making changes in what's going on — and we can tell this plant, if you don't change what you're putting out in our air, then you cannot continue to be here.

"I'm very saddened to know that the area that I grew up in... is just a haven for toxic waste, and that we could very well be affected by what's coming out of this coal plant. So we have to figure out, now that we know about this plant, how we're going to start dealing with this challenge — while we're dealing with all the other challenges that we have to deal with in Cleveland."—Jocelyn Travis, longtime Glenville resident

Advancing Solutions That Safeguard Communities Against Coal Fired Power Plant Pollution

We can make affirmative changes in our energy practices that will ensure that we have the power we need, while preserving the health and wellbeing of communities.

Shutting down the 90 failing plants that scored an "F" would reduce U.S. power production by only 9.2%. This amount that could easily be substituted by increased energy conservation and renewable energy production. The key point is that doing so would *reduce the number of Americans living within three miles of a coal plant by 58.4%* and therefore reduce thousands of hospitalizations, deaths, and incidents of illness in the affected communities.

Our central foci are to advance energy efficiency and clean energy while ensuring that measures are in place to reduce community exposure to pollutants as we make the shift to a clean energy future.

The message arising from this report is simple, *we must shut down these polluting life-compromising coal plants.* The path to doing so involves engagement from all of us to make sure policies and systems protect public health while providing the energy we require to function and maintaining the economic wellbeing of communities.

Therefore, we recommend the following:

- I. Increase research initiatives regarding our energy choices and the impact on communities.***
 - ❖ Research institutions must deepen their focus on examining the myriad connections between energy production, air pollution, public health and wellbeing, and climate change. Extensive data already exists, as referenced throughout this report, on the connections between public health and coal fired power plants. Data also demonstrates the racial disparities in the location of these polluting facilities and the resulting disproportionate exposure. This data presents a compelling call to action.

- II. Educate communities on the impact of coal fired power plants on public health and the environment.***
 - ❖ Public health, environmental, civic, and other organizations must ensure that communities are educated about the impact of coal fired power plants on community wellbeing. NAACP, LVEJO, and IEN already prioritize education of our members and communities. However, in each conversation we have, we always hear that people do not know about the impact of the coal fired power plants in their communities. Communities must be further educated so that they

are informed enough to have the choice regarding whether to take action in their own interests to ensure that they are breathing clean air.

III. *Support communities organizing to increase community involvement in ensuring that energy related policies and practices do no harm*

- ❖ The philanthropic community must support grassroots community organizing as communities become informed and wish to take action on advancing policies and practices to ensure that the US shifts to energy efficiency and clean energy while strengthening regulations to safeguard communities from polluting facilities.

IV. *Advance just energy policies*

- ❖ The Clean Air Act must be preserved at all costs. This bedrock environmental and public health policy is the cornerstone of measures to regulate pollution caused by various practices. Communities must ensure that their elected officials recognize the critical significance of this policy for the wellbeing of communities and ensure that this policy and the Environmental Protection Agency as its steward, maintain full authority.
- ❖ The proposed EPA Mercury and Air Toxics Rule targets the emissions of mercury and fine particles, which is a significant advancement over the current narrow controls of NOx and SOx emissions. Communities must engage in the process to finalize this rule by providing comments to support and guide a strong rule which protects the air we breathe from pollution.
- ❖ Congress must enact policies to significantly increase subsidies for clean energy to ensure that clean energy is an affordable and accessible alternative.
- ❖ Congress must enact policies to significantly reduce oil subsidies.
- ❖ State and federal energy efficiency and clean energy grant programs must be increased to incentivize significant scale up of initiatives to reduced energy use and advance clean alternatives to energy production.

V. *Improve corporate responsibility in energy production*

- ❖ Community organizations must engage directly with plant owners to advocate for their rights to clean air and negotiate regarding plant closure and development of alternative electricity generating and revenue generating industries.
- ❖ Community organizations and others must ensure that shareholders recognize the impact of the actions of the industries they fund on communities.
- ❖ Community organizations and others must engage in direct action where warranted if all other measures are not effective in ending the polluting practices that are impacting the wellbeing of communities.

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- ¹ Goodell, Jeff. *Big Coal: The Dirty Secret Behind America's Energy Future*. Boston: Houghton Mifflin, 2006, p. 119.
- ² U.S. EIA, "Net Generation by Energy Source."
- ³ U.S. Energy Information Administration. "Electricity Net Generation: Electric Power Sector, 1949-2008." Accessed March 2010. <http://www.eia.doe.gov/aer/txt/ptb0802b.html>
- ⁴ U.S. EIA. "Existing Electric Generating Units in the United States."
- ⁵ Clean Air Task Force. "Death, Disease and Dirty Power: Mortality and Health Damage Due to Air Pollution from Power Plants." Oct. 2000
- ⁶ Black Leadership Forum, Southern Organizing Committee for Economic and Social Justice et al. "Air of Injustice: African Americans and Power Plant Pollution." Oct. 2002, pp. 7-10.
- ⁷ EPA, "Clean Air Markets Unit Level Emissions Report."
- ⁸ EPA, "1970-2008 Average Annual Emissions, All Criteria Pollutants."
- ⁹ EPA, "Clean Air Markets Unit Level Emissions Report."
- ¹⁰ EPA, "1970-2008 Average Annual Emissions, All Criteria Pollutants."
- ¹¹ "Air of Injustice," pp. 7-10.
- ¹² U.S. Environmental Protection Agency. "Particulate Matter: Health and Environment." Accessed April 2010. <http://www.epa.gov/pm/health.html>
- ¹³ National Energy Technology Laboratory. "2007 Coal Power Plant Database." <http://www.netl.doe.gov/energy-analyses/pubs/database/XLS%20CPPDB%202007%20Pvt%20-%20Public.zip>
- ¹⁴ EPA, "Clean Air Markets Unit Level Emissions Report."
- ¹⁵ U.S. Centers for Disease Control and Prevention. "Age-Adjusted Invasive Lung Cancer Incidence Rates and 95% Confidence Intervals by State." 2006. <http://apps.nccd.cdc.gov/uscs/cancersrankedbystate.aspx#text>
- ¹⁶ Note: Demographic data in this report are based on the 2000 Census.
- ¹⁷ All demographic data in this study is from the 2000 U.S. Census.
- ¹⁸ U.S. EIA, "Emissions of Greenhouse Gases Report."
- ¹⁹ U.S. Energy Information Administration. "Emissions of Greenhouse Gases Report." Nov. 28, 2007. <http://www.eia.doe.gov/oiaf/1605/archive/gg07rpt/index.html#units>
- ²⁰ United Nations. "Millennium Development Goals Report 2009: Statistical Annex." P. 15. <http://mdgs.un.org/unsd/mdg/Resources/Static/Data/2009%20Stat%20Annex.pdf>
- ²¹ Hoerner, J. Andrew, and Nia Robinson. "A Climate of Change: African Americans, Global Warming, and a Just Climate Policy for the U.S." Environmental Justice and Climate Change Initiative, July 2008, pp. 2-3.
- ²² Leone et. al. (2008). The Availability and Affordability of Healthy Food Items in Leon County, Florida, 2008. Retrieved February 1, 2011 from Nutritional Environment Measures Survey: http://www.med.upenn.edu/nems/docs/Leone_et_al_Abstract.doc
- ²³ Morland, K., Wing, S., Roux, A. D., & Poole, C. (2002b). Neighborhood Characteristics Associated with the Location of Food Stores and Food Service Places. *American Journal of Preventive Medicine*, 22(1), 23-29.
- ²⁴ Map the Meal Gap, Feeding America <http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>
- ²⁵ American Obesity Association, 2002. <http://www.obesity.org/subs/fastfacts/Obesity_Minority_Pop.shtml> (13 December 2005).
- ²⁶ Race, Poverty, and Hunger, Food Research and Action Center http://prrac.org/full_text.php?text_id=757&item_id=7796&newsletter_id=63&header=Food+/%2B%2BNutrition+/%2BHunger.
- ²⁷ Race, Poverty, and Hunger, Food Research and Action Center http://prrac.org/full_text.php?text_id=757&item_id=7796&newsletter_id=63&header=Food+/%2B%2BNutrition+/%2BHunger.
- ²⁸ Black Leadership Forum, Southern Organizing Committee for Economic and Social Justice et al. "Air of Injustice: African Americans and Power Plant Pollution." Oct. 2002.
- ²⁹ Environmental Integrity Project. "Dirty Kilowatts: America's Most Polluting Power Plants." July 2007. http://www.dirtykilowatts.org/Dirty_Kilowatts2007.pdf
- ³⁰ In recent years, coal power companies and supportive politicians have argued that CO₂ emissions from coal power plants can be limited using carbon capture and sequestration (CCS) technology; however, CCS is fraught with numerous technical problems, would be prohibitively expensive, and is years, if not decades, away from commercial viability. For more information on CCS, see Greenpeace's report "False Hope: Why Carbon Capture and Storage Won't Save the Climate."
- ³¹ U.S. Energy Information Administration. "Net Generation by Energy Source." Mar. 15, 2010. http://www.eia.doe.gov/cneaf/electricity/epm/table1_1.html
- ³² EPA, "1970-2008 Average Annual Emissions, All Criteria Pollutants."
- ³³ U.S. Energy Information Administration. "Net Generation by Energy Source." Mar. 15, 2010. http://www.eia.doe.gov/cneaf/electricity/epm/table1_1.html
- ³⁴ EPA, "1970-2008 Average Annual Emissions, All Criteria Pollutants."
- ³⁵ "Census 2000 Summary File 1."
- ³⁶ Google Earth, accessed March 2010.