

DYNEGY'S TOXIC ASSETS:  
**LEGACY COAL POLLUTION  
IN THE HEARTLAND**



## This report was compiled by Sierra Club and the Central Illinois Healthy Community Alliance.

The Central Illinois Healthy Community Alliance (CIHCA) is a coalition of individuals and organizations (listed below) committed to creating a sustainable and healthy community for Central Illinois. CIHCA is concerned about the decades of air and water pollution created by the Edwards Coal Plant south of Bartonville. CIHCA is working to retire the Edwards plant and transition Central Illinois to a cleaner energy economy by reducing energy use, and moving to renewables such as wind and solar. CIHCA's goals are to

- Secure a clear phase-out plan for the Edwards Coal Plant
  - Ensure a just transition for local workers. Advocate for retraining and green jobs programs focused on energy efficiency and clean energy technologies.
1. Protect the local land and water by securing a clean-up of the coal plant sites, including coal ash pits.
  2. Bring about a transition from the use of health-harming fossil fuels to clean, safe, renewable energy in Central Illinois.

Learn more about the Central Illinois Healthy Community Alliance at [bit.ly/cihcaweb](https://bit.ly/cihcaweb).

The Sierra Club is the nation's oldest and largest grassroots environmental advocacy group. With over 23,000 members in Illinois, the Sierra Club is working statewide to address pollution from Dyengy's large fleet of Illinois coal plants in Baldwin, Coffeen, Duck Creek, Havana, Hennepin, Wood River, Joppa, and Newton. Learn more about our mission to "explore, enjoy, and protect the planet" at [sierraclub.org](https://sierraclub.org).

### MEMBERS OF THE CENTRAL ILLINOIS HEALTHY COMMUNITY ALLIANCE

**Central Illinois  
Chapter of the  
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**NAACP Peoria  
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**League of Women  
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**Central Illinois  
Global Warming  
Solutions**

**Peoria Families  
against Toxic  
Waste**

**Bradley Green  
Action**

**ICC Student  
Association for the  
Environment**

## INTRODUCTION:

# FIGHTING FOR HEALTHY, PROSPEROUS ILLINOIS COMMUNITIES

Houston-based Dynegy is an energy company that may have recently become your neighbor. The company owns several coal-fired power plants in Illinois, and, in 2013, it purchased five more across the state. Dynegy isn't the kind of neighbor you want. The effects of the company's pollution range from birth defects and learning disabilities to premature death. According to one study, the amount of pollution spewed out by Dynegy's Illinois coal fired power plants can be linked to 177 deaths, 2,986 asthma attacks, and 274 hospital visits in 2012 alone.<sup>1</sup> Dynegy's plants deposit toxic pollution into rivers<sup>2</sup> where you fish and swim with your family.

As we detail in this report, Dynegy's impacts to nearby communities are well known to Illinois regulators such as the Illinois Environmental Protection Agency and the Illinois Pollution Control Board, executive bodies whose respective missions are to *"protect health, welfare, property, and the quality of life"* and to *"restore, protect, and enhance the quality of the environment."* Unfortunately, both agencies have endorsed Dynegy's risky bet to buy several aging coal plants without adding modern pollution controls.

## SECTION 1:

# DYNEGY'S DANGEROUS HISTORY OF COMPULSIVE RISK TAKING

Dynegy's past follies demonstrate its penchant for risky business ventures. In 2001, Dynegy attempted to buy Enron. Just weeks after the takeover bid, the full scope of the Enron scandal was revealed and the company was essentially deemed worthless.<sup>3</sup> In 2002, Dynegy sold the Northern Natural Gas Company to MidAmerican Energy Holdings for \$572 less than it had paid for it.<sup>4</sup> Also in 2002, Dynegy was forced to lay off 14 percent of its workforce when it closed its online trading business after misleading investors about its success.<sup>5</sup> Throughout the 2000s Dynegy planned to build coal-fired power plants in 11 states through its subsidiary, LS Power. This ill-conceived

In the process of protecting communities from a dangerous and irresponsible energy company, we must work together to ensure the existing work force that is part of the dirty energy economy can transition into new family-sustaining jobs that do not pollute our water and our air. To that end, we need a state-wide and community-by-community conversation about where to go from here.

In **Section 1** we detail Dynegy's past behavior, including how it has exited communities in the past, as a warning that we must call for something different in Illinois. In **Section 2**, we explain how Dynegy's business model is designed to pass risk from shareholders to communities. In **Section 3** we walk through what those risks are, from air and water pollution to the legacy of toxic waste. In **Section 4** we begin a conversation about clean energy and community transition. In **Section 5**, we provide a checklist of action opportunities.

It will take sustained engagement from communities across the state of Illinois to say no to Dynegy's past practices of irresponsible pollution, and to call on decision-makers to lead the conversation about community transition. We hope this report underscores the urgency for the hard work ahead of us.

energy policy was an utter failure—by Sierra Club's count, only two of the 11 projects actually moved forward. Due in large part to Sierra Club's opposition, LS Power's plans to saddle the next several generations with a high-carbon energy portfolio was thwarted and Dynegy's promise about the good bet it was making on coal never became a reality.

As Dynegy emerged from bankruptcy, it decided to take another gamble. In 2013, Dynegy announced plans to purchase Ameren's troubled Illinois coal burning power plants, despite Ameren's very public conclusion that the plants were dragging the com-

pany down financially. Dynegy announced no plans to clean up Ameren's old plants or install updated and widely available pollution controls. Dynegy's gamble is that Illinois communities won't mind the extra pollution while it waits out a few bad years in the energy market before it can make money for its shareholders again.<sup>6</sup> Such a risky and irresponsible gamble goes against the most recent analysis of power demand and prices in the region including Ameren, which cited "significantly depressed power prices," the "high-cost of environmental controls," right before it ultimately put the plants up for sale.<sup>7</sup> Foremost in

collateral damage of Dynegy's risky bet is the Illinois communities and workforce that will be left behind.

### TREATING COMMUNITIES POORLY

Purchasing Ameren's old and outdated Illinois coal plants demonstrates Dynegy's appetite for big gambles. Other stories of Dynegy's behavior as a bad neighbor forewarns of some of the challenges Illinois communities will face if we do not collectively call for a responsible transition away from coal.

### NEWBURGH, NEW YORK - 2012

In 2012, after a decade of financial woes, Dynegy declared bankruptcy amid a whirlwind of fraud and mismanagement allegations. It auctioned off its Roseton and Danskammer coal plants in New York to aid its climb out of bankruptcy.<sup>8</sup> This sale came on the heels of a 5-week walkout by IBEW local 320 where workers responded to Dynegy's demand for a pension freeze and elimination of retiree benefits.<sup>9</sup>

Dynegy left Newburgh with \$17 million in unpaid property taxes.<sup>10</sup> This represented approximately 40 percent of the town's school budget.

"Dynegy's failure to pay their 2012 taxes will have devastating effects on local government services and programs."

— Joel Kleiman, Orange county's commissioner of finance, May 2012<sup>11</sup>

Dynegy then sued the town of Newburgh and the Marlboro School District, alleging that its local coal-fired power plants were overvalued and that it was paying too much in taxes. Dynegy eventually reached a settlement with the town of Newburgh, where the town had to pay Dynegy \$3.9 million.<sup>12</sup> It reached a separate settlement with the school district, with the school district

eventually paying Dynegy \$11 million. Marlboro was forced to raise the property tax rate by over 14 percent, and get bailed out by the State of New York to make up for the budget deficit.<sup>13</sup>

Dynegy's abrupt and irresponsible exit from Newburgh forced the closure of two elementary schools, increased class sizes, reduced art and music programs, eliminated extracurricular clubs and modified sports. A responsible dialogue with the community would have allowed the town to plan for these changes.

In Newburgh, Dynegy left a financial mess for the community to deal with. In other communities Dynegy has left a legacy of pollution for local communities to clean up.

"[The Marlboro school district] plight is why elected officials must continue to push giant companies like Dynegy...to provide ample information about their operations, so communities can better plan for possible upheavals."

— Poughkeepsie Journal Editorial  
"Marlboro's Plight Should Give Others Pause"  
September 7, 2013<sup>14</sup>

## OAKWOOD, ILLINOIS - 2011

Near the Dynegy Vermilion Coal Plant just outside of Oakwood, community members have long been concerned about the coal ash that was used as basefill for township roads. When the facility officially closed in December of 2011,<sup>15</sup> Dynegy immediately applied for a change in its tax status, which pulled money out of the township and county budgets. The coal plant operated three coal ash pits, two of which are now structurally failing, in the western floodplain of the Middle Fork of the Vermilion River, the state's only National Scenic River. These pits are leaking coal ash, and the arsenic, mercury, and lead that it contains, into the Vermillion River every day.<sup>16</sup>

The ash pits at Vermillion leak during rainfall and flood events and continue to threaten the community with a potential breach. Two of the ash pits were built in the 1960s without liners and are breaking down due to flooding, erosion from the river, and potentially from subsidence of underlying voids from old coal mines. Leakage of coal ash pollutants including boron, sulfates, iron, and manganese has been noted in the groundwater and discolored seeps can be readily seen from the river.<sup>17</sup> Ash pit discharges have been permitted from the third lined ash pit to the river for years, but critically important monitoring and fish tissue sampling for common coal ash pollutants of concern like arsenic and cadmium were never required.

The Middle Fork River corridor supports a diverse and healthy fish and wildlife population. The river system is inhabited by 24 species officially identified as state and/or federal threatened or endangered species. The river system is also used for wildlife viewing, photography, hunting, angling, hiking, horseback riding and paddling.

The Middle Fork is one of the most popular water trails in the state and enjoys visitors spring through fall for canoeing, kayaking, and tubing. Dynegy has proposed to simply cap these pits and walk away from the liabilities. This proposal would leave the coal ash in place at all three existing coal ash pits at Vermillion with only a cap over



*THIS STEEL CAGE OF ROCKS BACKED BY A GEO-TEXTILE LAYER WAS DESIGNED TO PROTECT THE RIVER FROM THE ASH PIT. EVEN THE SIMPLEST OF STRUCTURAL CONTROLS HAS FAILED AT THE VERMILION RIVER SITE.*

the pits to prevent additional pollution. This plan would allow groundwater contamination, seepage to the river, and direct discharges of coal ash in perpetuity. Groundwater is known to move through and under the ash pits toward the river and flooding from the river brings water up underneath the ash ponds for contact with coal ash.<sup>18</sup> The company is in the process of working out a closure plan with Illinois EPA in which the ash would be left in the floodplain rather than removed and disposed of in an engineered lined dry landfill.

Dynegy has proven itself as a bad neighbor in Newburgh and in Oakwood, and it now appears to repeating the pattern in communities like Peoria, Alton, and Joppa.

## SECTION 2:

# DYNEGY'S DANGEROUS PROPOSITION SHIFTS RISK FROM COMPANY TO COMMUNITY

Dynegy's history as a risk-seeking company willing to walk away from communities makes its expansion into several more Illinois communities a cause for concern. Dynegy's acquisition of Ameren Corporation's five Illinois-based coal burning power plants was structured to insulate Dynegy from state environmental regulations and related risks, according to financial analysts and the company's own statements.<sup>19</sup> Operating aging coal-fired power plants without updated pollution control equipment is inherently risky, and Dynegy's proposition doesn't do away with these risks (detailed in Section 3). It simply shifts those risks away from Dynegy to the communities where these old plants operate.

In March 2013, Dynegy, through a new subsidiary called Illinois Power Holdings (IPH), purchased five coal-fired power plants from Ameren. Dynegy predicated this purchase on receiving special treatment by the state to exempt the plants from state pollution control laws. Dynegy insulated itself from having to pay to clean up the plants by doing three things: (1) it created IPH as a separate company that would be liable for costs of clean up; (2) it decided IPH was on its own to raise money, and did not allow IPH access to Dynegy's capital or the benefit of Dynegy's strong balance sheets; (3) it then convinced Illinois regulators that IPH would experience "hardship" if it were to have to pay for pollution controls.

"Thus, the record is clear that IPH was created for the sole purpose of taking over the [Ameren] facilities, and IPH has not provided any capital for those facilities."

— *Dissenting Opinion by Dr. Deanna Glosser, Chairwoman of the Illinois Pollution Control Board*

Financial experts saw right through the ruse and raised the alarm. A financial analyst testified that IPH continues to be at "significant risk of going into bankruptcy in the first several years of its existence," leaving in its wake not only major environmental issues, but also job

and pension losses.<sup>20</sup> IPH's own financial advisor testified before the Illinois Pollution Control Board that, despite trying, Dynegy was unsuccessful in finding additional credit for IPH due to "low cash flow profile, limited lien capacity of the assets, existing debt, and the weak credit profile..."<sup>21</sup>

"We remain negative on the outlook for Dynegy despite the upcoming deal close of its Ameren acquisition...Dynegy remains uniquely exposed to future coal ash and effluent guideline regulations from the EPA."

— *UBS Utilities. Julien Dumoulin-Smith.*

*November 22, 2013*

Financial experts were not the only ones to raise red flags about the dangers of Dynegy's purchase and variance. The public cried foul, urging the state of Illinois to uphold its mission to ensure a healthy environment for Illinoisans. The Illinois Pollution Control Board received 148 oral comments during the hearing about IPH's variance petition, many urging the Board to uphold the state's environmental regulations and deny the variance. Several individuals living near the plants offered testimony about adverse health effects such as dealing with their children's asthma attacks and family cancer histories. All told, the Board received 5,676 written public comments, more than 9 out of 10 in opposition to granting the variance.

Despite contrary legal precedents, and despite a strong dissent from the Chairwoman of the Board, Dr. Deanna Glosser, the Board granted the variance in late November 2013.

Local residents will bear the costs of this profit seeking gamble in the form of years of ongoing pollution and public health consequences. Due to the variance, state air quality will suffer from five more years of excess

sulfur dioxide (“SO2”) pollution and the resulting fine particulate matter.

Immediately following the variance, financial analysts didn’t think Dynegy was home free. Julien Dumoulin-Smith at UBS maintained a negative outlook for the company’s stock, referencing unique exposure to future liabilities, and the fact that all of the elements of the deal simply confirm that the coal plants are nearly worthless.<sup>22</sup> Analysts at Morningstar named Dynegy one of the top three companies at risk from increased solar deployment, noting that Dynegy’s coal fleet “is our biggest concern” and that these plants will lose relevance as distributed generation grows.<sup>23</sup>

In sum, Dynegy’s proposition to buy several aging coal plants that were losing money, to delay investments in much-needed pollution controls, and to shield itself from any liability through the creation of an undercapitalized subsidiary is a risky bet at best, and a devastating verdict for nearby communities that bear the burden of persistently high pollution and delayed cleanups at worst. Power plants need maintenance: things break, ash ponds leak, and even catastrophic fires and explosions can take place. It’s not possible to eliminate risk. Instead, Dynegy has shielded itself from those risks and instead shifted them to nearby communities.

**SECTION 3:**

# DYNEGY’S DANGEROUS SACRIFICE ZONES

After exploring Dynegy’s risky business bet, it’s time to ask what’s really on the line. Section 3 explores the consequences on public health.

**POLLUTED AIR**

Coal fired power plants are notorious polluters. Nationwide, they account for 60 percent of our sulfur dioxide emissions, 50 percent of our mercury emissions, and 50 percent of acid gas emissions.<sup>24</sup> At 81 percent, coal plants also make up the lion’s share of greenhouse gas emissions in the electric sector.<sup>25</sup> Dynegy’s coal fleet is old, and especially dirty.

Most types of air pollution are impossible to detect with the naked eye, which is part of what makes air pollution so dangerous. Coal plant stacks release a cocktail of pollutants, some so potent they are measured in pounds, and others so prevalent they are measured in tons. The health effects from this pollution include asthma attacks, bronchitis, respiratory distress, heart attack, and stroke. Some of the pollution is so

devastating that it is classified as “toxic” and has neurotoxic, radioactive, and carcinogenic properties. Dynegy emits tens of thousands of tons of this dangerous pollution each year at its Illinois plants.

One pollutant in particular – sulfur dioxide (SO2) – presents one of the most imminent threats to Illinois communities. The latest science reveals that very short term exposure to high levels of SO2 can be devastating to our health. Exposure as short as five minutes can have adverse respiratory effects including bronchoconstriction and increased asthma symptoms.<sup>26</sup> Exposure to unsafe levels of SO2 leads to increased emergency room visits and hospital admissions for respiratory illness, especially in at-risk populations like children, the elderly, and asthmatics. SO2 is also dangerous because it can react with other compounds in the air to form another type of pollution called “fine particulate matter.” Fine particulate matter penetrates deeply into the lungs and can lead to increased hospital

PLANT NAME	SIZE	MODERN SO2 CONTROLS	SO2 EMISSIONS (ANNUAL IN 2012)	ESTIMATED ASTHMA ATTACKS (ANNUAL 2012)	ESTIMATED HEART ATTACKS (ANNUAL 2012)	PREMATURE DEATHS (ANNUAL 2012)
E.D. Edwards	695MW	No	11,803 tons	490	45	29
Coffeen	915MW	Yes	103 tons	46	4	3

PLANT NAME	LOCATION	SAFE LEVEL (MEASURED IN MICROGRAMS PER CUBIC METER) <sup>28</sup>	ALLOWABLE EMISSIONS (MEASURED IN MICROGRAMS PER CUBIC METER)	COMPLIES WITH EPA STANDARD?
Wood River	Alton, IL	196.2	362.4	No
E.D. Edwards	Bartonville, IL	196.2	1,618.0	No
Joppa	Joppa, IL	196.2	1,118.9	No
Hennepin	Hennepin, IL	196.2	1,084.5	No
Newton	Newton, IL	196.2	315.0	No

admissions and premature death. Fine particulate matter is responsible for 13,000 premature deaths each year, and SO<sub>2</sub> is one of the causes of its prevalence.<sup>27</sup>

There are two reasons Dynegey’s SO<sub>2</sub> pollution is so concerning: (1) SO<sub>2</sub> causes localized pollution hot-spots that vary in size and concentration depending on the geography near the plant and other physical characteristics of the plant; and (2) Illinois authorities let Dynegey off the hook in reducing its SO<sub>2</sub> pollution as required under Illinois law in the recent variance proceeding. The difference in pollution, and corresponding health effects between a coal plant with modern controls, and one without them, is startling. Compare Dynegey’s larger Coffeen plant with its smaller E.D. Edwards plant, for example, and the need for modern updates to these old plants is immediately evident.

The Sierra Club, following the U.S. Environmental Protection Agency’s currently available methodology for air quality modeling, evaluated the effects of SO<sub>2</sub> pollution from several of Dynegey’s coal plants that do not control their SO<sub>2</sub> pollution. The results revealed that all of the plants lacking SO<sub>2</sub> controls present a real risk of unsafe air.

When you overlay those numbers with a map on following page and use air dispersion models to determine where the pollution is going, and in what concentration, you see large swaths of Illinois at risk from unsafe air.

What’s troubling is that Illinois regulators don’t seem to have a problem creating sacrifice zones across Illinois. Apparently, the health of communities does not rise

above the balance-sheet interests of Dynegey and its shareholders. In an unprecedented rollback of state law, the IPCB granted Dynegey its request for five more years to decide whether to clean up its old coal plants. The Sierra Club, Environmental Law and Policy Center, and Respiratory Health Association submitted testimony detailing the sham business model (see more in previous section), the localized effects of SO<sub>2</sub> pollution that could result from the Board’s decision, and Dynegey’s sketchy math, relying on already closed coal plants for its “benefit” analysis. The Illinois Attorney General’s office weighed in with similar concerns.

The Board barely grappled with the environmental harms alleged, instead relying heavily on Dynegey’s complaints that reducing pollution would cost it money. The Board pointed to “severely depressed electricity prices,”<sup>29</sup> and stated that “Dynegey must maintain ‘strong credit metrics to support its current credit rating and preserve its access to affordable capital’”<sup>30</sup> as an excuse to allow the richly capitalized Dynegey to operate the power plants through an undercapitalized subsidiary. In fact, the Board referenced “depressed prices” 19 times, while “environmental harm” was mentioned only six times.

IPCB Chair Dianna Glosser understands the air pollution risk. In a scathing dissent she wrote, “I have reviewed the USEPA’s report concerning health effects of increased SO<sub>2</sub> emissions and find that report telling. I have grave concerns about the impact of even a temporary increase in SO<sub>2</sub> emission near the AER facilities.”<sup>31</sup> Unfortunately, the Board created a dangerous precedent for sacrificing clean air, clean

water, and public health for any company that claims it can't pay to clean up.

Residents of Central Illinois are tired of wondering whether it's safe for their kids to play outside at school, and are even more tired of waiting around for the Illinois authorities to act. The Sierra Club, the Natural Resources Defense Council, Respiratory Health Association, and the Environmental Law and Policy Center filed suit last year targeting more than 1,000 Clean Air Act violations at Dynegy's E.D. Edwards plant.<sup>32</sup> Local residents are forced to look past Illinois regulators, and turn to the U.S. Environmental Protection Agency to take swift action to reduce SO<sub>2</sub> pollution in the region, which has already triggered EPA's finding that the area is not attaining safe air levels.<sup>33</sup> Increasingly, it's dedicated citizens who are taking a stand.

"Since 2006 I've had two procedures to make my heart stay in normal rhythm, and I take medication to keep my heart in normal rhythm. I'll be 65 in December. I'll be 67 when E.D. Edwards was supposed to come under compliance without a variance. Now that Dynegy has this variance, I can only hope I'll be able to endure an additional five years of life-threatening pollution...I could be one of those premature deaths."

— East Peoria Resident Bob Jorganson

## POLLUTED WATER

Coal-fired power plants create toxic coal ash waste as the byproduct of coal combustion. Coal ash contains arsenic, mercury, lead, cadmium and other heavy metals and toxics that are mixed with water and put either into ash ponds or landfills and ultimately discharged into the closest waterway. According to the U.S. Environmental Protection Agency, power plants contribute more than half of the toxic water pollution in this country, dumping billions of pounds of pollution into America's rivers, lakes, and streams each year.

Illinois ranks 8th in the nation for the amount of coal ash generated each year— more than 4.4 million tons.<sup>34</sup> Too often, Illinois' ash ponds are built in floodplains near rivers needed for cooling water. Many

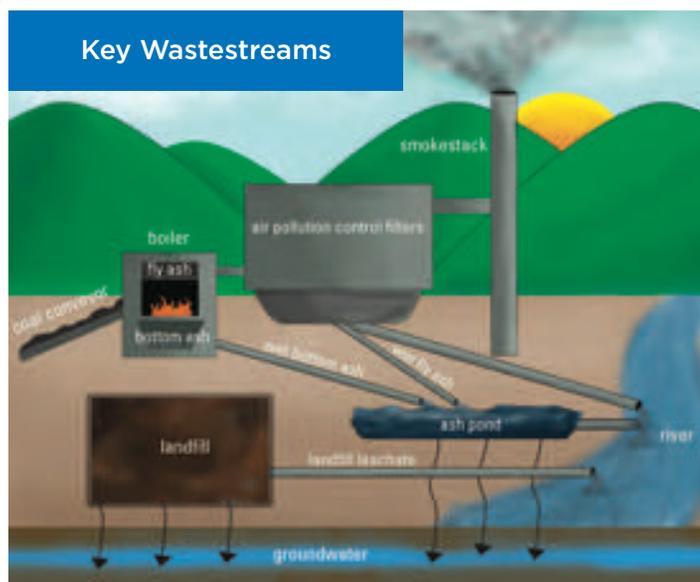
of these disposal ponds are unlined in areas with high groundwater tables. This means that when the water is high, both surface water and groundwater can inundate coal storage areas, mobilizing pollutants such as mercury, selenium, arsenic, chromium, and cadmium, which can cause cancer and brain damage<sup>35</sup> in humans and are harmful to fish and wildlife.<sup>36</sup>

Coal plants generally have three categories of effects on nearby water bodies: (1) freshwater intake for cooling and discharge of hot water; (2) ash pond discharges into surface waters; and (3) ash pond and landfill leakage into groundwater. Dynegy threatens Illinois waterways and groundwater— both of which provide drinking water to local communities—in each of these ways. Dynegy's aging and inadequate storage infrastructure also creates hazardous conditions in some communities.

## FRESHWATER USE FOR COOLING

Coal-fired power plants need a reliable source of cool water to operate. They draw water from nearby rivers through cooling water intake structures to keep steam condensers cool. Cooling water absorbs tremendous amounts of heat as steam is condensed back to water on a continuous cycle. This cooling water, which is now hot, is discharged back into the river. This process repeats on a near continuous cycle.

In total, Dynegy's Illinois power plants use 1,823,789 gallons of freshwater per minute.<sup>37</sup> When water is drawn into the plant, it crushes larger aquatic life against screens, and sucks smaller aquatic life inside



## E.D. EDWARDS COAL ASH POND



## HAVANA COAL ASH POND

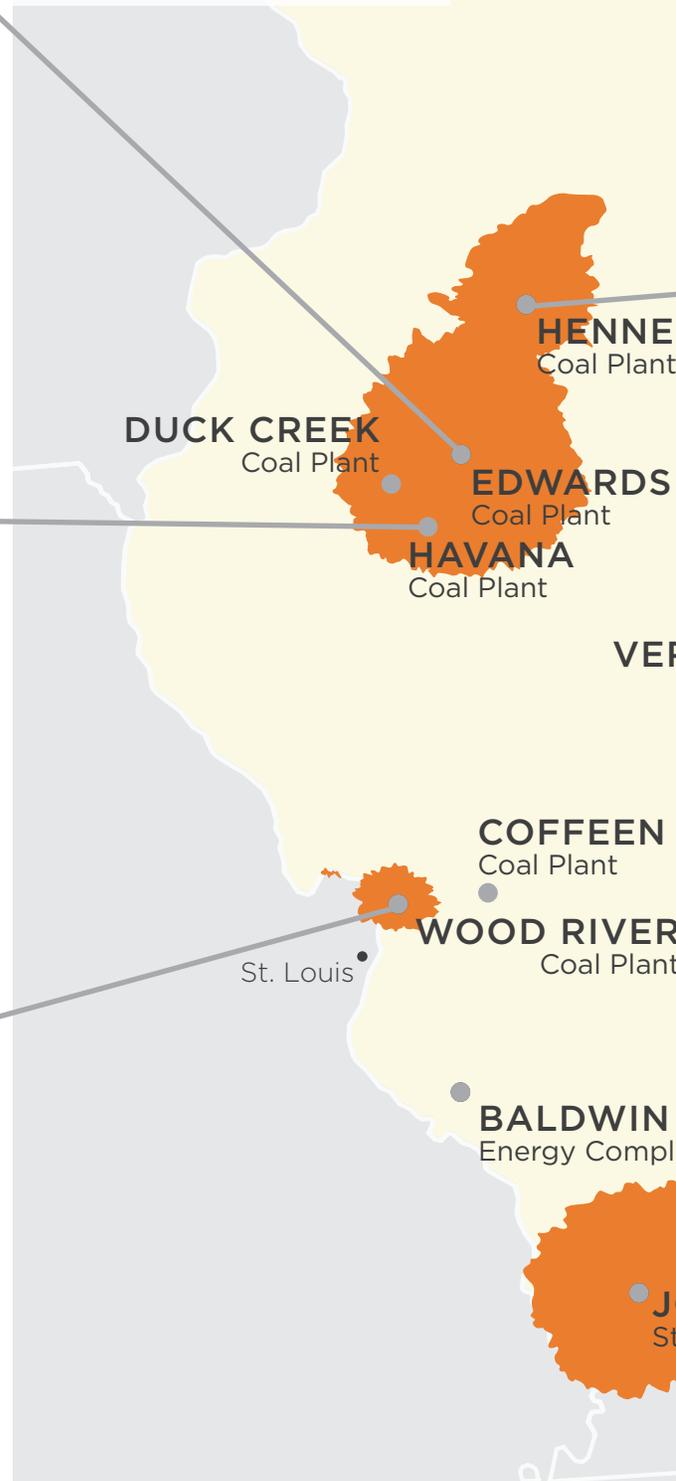


## WOOD RIVER COAL ASH POND



## THE TOXIC POLLUTANT DYNEGY'S UNSCRUBBED

Modeled SO<sub>2</sub> emissions from Dynegy's largest polluters show IL sacrifice zones. All shaded areas are in violation of the EPA's one-hour SO<sub>2</sub> limits.



# ION PLUMES FROM BBED COAL PLANTS



## HENNEPIN COAL ASH POND



## VERMILION COAL ASH POND





*IN MARCH OF 2014, A DUKE ENERGY COAL ASH IMPOUNDMENT FAILED AND SPILLED MORE THAN 39,000 TONS OF COAL ASH INTO NORTH CAROLINA'S DAN RIVER*

the plant's system. Billions and billions of fish die this way each year.<sup>38</sup> When the water is discharged back into nearby rivers, it is so hot that it can kill nearby aquatic life. Studies have also documented toxicity to fish and multiple developmental, physiological, and behavioral abnormalities in many species of amphibians inhabiting wetlands near coal ash disposal sites.<sup>39</sup>

### **COAL ASH DISCHARGES**

Dynegy's coal ash waste is discharged from 46 ash pits<sup>40</sup> and impoundments into nearby rivers, including the Illinois River and the Mississippi River. Dynegy does not employ modern methods of treating its wastewater discharges, nor has it transitioned to dry ash handling. Instead, Dynegy discharges toxin-laced water directly into Illinois' rivers, leading to degraded public ground and surface waters. This adversely affects residential, agricultural, and industrial uses.

Communities across Illinois get their drinking water from the same rivers that Dynegy treats as its dumping grounds for wastewater and coal ash disposal. For example, nearly 5,000 residents are served by the

Sparta Water District, which draws its water supply from the Kaskaskia River, downstream of the Baldwin power plant. The Illinois River, downstream of the Hennepin plant, supplies water for over 136,000 people in the greater Peoria area.

The Illinois River is particularly hard hit by Dynegy with its coal-fired Duck Creek, E.D. Edwards, Havana, and Hennepin plants all discharging to the river more than 1,043 million gallons of polluted water daily.<sup>41</sup> The Illinois river is a life-sustaining part of Central Illinois. Several communities along the River rely on its clean water for their small businesses and tourist attractions, commercial fisherman draw their income and livelihood from healthy fish, and residents rely on clean water and a healthy ecosystem for recreation and aesthetic enjoyment. The Illinois River valley is also a rich ecosystem for many types of wildlife and has historically been one of the most important migration areas for waterfowl in North America.

The state of Illinois has recognized the richness of the Illinois River and its freshwater resources. The

state recently spent millions of dollars at Emiquon Preserve, an area of 5,800 acres of wetlands, which supports over 212 species of birds and that had nearly two million new fish stocked in 2007. However, the species that rely on Emiquon are put in danger by compounding pollution; the preserve sits downstream of Duck Creek, E.D. Edwards, Hennepin, and is just upstream and almost adjacent to Havana.

### COAL ASH GROUNDWATER LEAKAGE

Direct surface water discharges are not the only danger from coal ash. Discharges into groundwater from aging, poorly maintained, and unlined ash ponds at Dynegy's coal plants are well-documented and are a significant cause for concern. The Illinois EPA issued violation notices for four Dynegy facilities (Baldwin, Coffeen, Newton and Vermilion) in 2012, followed up by

a Notice of Intent to Pursue Legal Action on February 13, 2013. The extent of the groundwater contamination is outlined below.

### COAL ASH STORAGE HAZARDS

The way Dynegy disposes of coal ash presents grave dangers to Illinois waterways and the people and wildlife that rely on them. However, another danger also lurks behind the dam walls where this coal ash is stored. We are all too familiar with what happens when a coal ash impoundment is breached by a dam failure or other structural breach. Though there have been many, two notable breaches that have occurred in recent history include the 2011 dam failure at the TVA facility in Kingston, Tennessee, over one billion gallons of coal waste spilled into the Emory River. In March of 2014, a Duke Energy coal ash impoundment

PLANT NAME	LOCATION (COUNTY, RECEIVING WATER)	# OF HEAVY METALS EXCEEDING GROUNDWATER QUALITY STANDARDS?	DISSOLVED SOLIDS EXCEEDING GROUNDWATER QUALITY STANDARDS?	SULFATES EXCEEDING GROUNDWATER QUALITY STANDARDS?	GROUNDWATER MONITORING	GROUNDWATER AFFECTED
Baldwin	Randolph, Kaskaskia River	6	Yes	Yes	No	Unknown
Coffeen	Montgomery, Coffeen Lake	2	Yes	Yes	Yes	Unknown
Duck Creek	Fulton, Illinois River	3	Yes	Yes	Yes	Yes, at unlined ponds (5/6)
E.D. Edwards	Peoria, Illinois River	3	No	Yes	No	Unknown
Havana	Mason, Illinois River	1	No	Yes	Yes	Yes
Hennepin	Putnam, Illinois River	0	Yes	Yes	Yes	Yes
Joppa	Massac, Ohio River	8	No	Yes	No	Unknown
Newton	Jasper, Newton Lake	2	Yes	Yes	No	Unknown
Vermilion	Vermilion, Middle Fork Vermilion River	3	Yes	Yes	Yes	Yes
Wood River	Madison, Mississippi River	3	Yes	Yes	Yes	Yes

SOURCES: SEE ENDNOTE<sup>42</sup>

failed and spilled more than 39,000 tons of coal ash into North Carolina's Dan River.<sup>43</sup> Coal ash impoundment breaches devastate rivers, threaten public drinking water supplies, and damage any structures in their wake. There are more than 90 coal ash impoundments at power plants in Illinois, yet most Illinois families don't know how close the nearest coal ash impoundment is.

In Illinois, impoundments that contain coal ash are permitted and inspected by the Illinois Department of Natural Resources Office of Water Resources. Many of Dynegy's ash impoundment dams are "unpermitted" by the State and therefore not inspected for safety and stability. Dynegy's Havana and Wood River impoundments have been deemed by the EPA to be "high hazard," denoting that a failure will probably cause loss of human life. If Dynegy's ash impoundment at Wood River were to breach,<sup>45</sup> the flood wave of coal ash material would extend five miles downstream. At Dynegy's Havana facility, if any of the four dams were to breach, the flood wave of coal ash material would extend five miles downstream, threatening grave danger to homes located immediately down gradient and the school within two miles of the ash ponds.

Living near a coal ash storage pond is significantly

more dangerous than smoking a pack of cigarettes a day, according to a risk assessment done by the EPA.<sup>46</sup> The toxins found in coal ash have been linked to organ disease, cancer, respiratory illness, neurological damage, and developmental problems. According to EPA, people living within one mile of unlined coal ash ponds can have a one in 50 risk of cancer—more than 2,000 times higher than what the EPA considers acceptable.

Exposure to toxic coal ash can lower birth rates, cause tissue disease, slow development and even kill plants and animals, leading to wildlife depletion and disruptions to ecosystems. The toxic pollution from coal ash builds up in exposed animals and plants, causing the pollution to make its way up the food chain when they are eaten. Children are more susceptible to the health impacts of coal ash—and according to the EPA, 1.54 million children live near coal ash storage sites.

The risks that coal plants present to nearby communities are immense and directly impact the quality of life for many Illinois residents from risks to drinking water to the threat of a local coal ash disaster. Dynegy's Illinois gamble is designed so that communities continue to bear these burdens, while it rolls the dice.

#### SECTION 4:

## CHANGING COURSE IN 2014

Community groups across Illinois are eager to make a fair and just transition away from Dynegy's polluting facilities to a clean, renewable energy economy in which all people have access to good jobs on a healthy planet. To get there, we need to immediately engage workers and communities in developing and implementing a bold vision for the future. That bold vision needs to leverage the impressive gains that Illinois is already making in clean energy.

### ROADMAP TO A CLEAN ENERGY FUTURE—THE TRIPLE WIN FOR ILLINOIS

To phase out the risks posed by coal-fired power plants, we must work just as diligently to phase in clean energy sources. Wind and solar energy have already proven to be strong, viable alternatives to

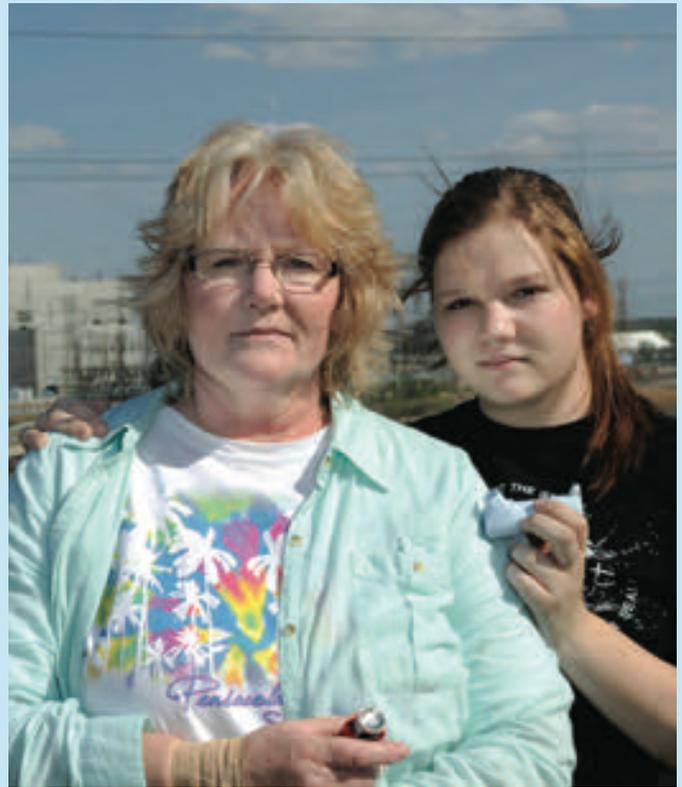
fossil fuels, and have delivered a triple win for Illinois' with (1) good jobs, (2) critical environmental benefits, and (3) a good deal for consumers.

Clean energy has been a bright spot in Illinois' economy. Since 2007, wind and solar energy alone have created almost 20,000 new jobs in Illinois, during the worst recession since the Great Depression. That adds up to nearly 100,000 people working in Illinois' clean energy industry as a whole today. According to a study recently released by the Clean Energy Trust, Illinois clean energy jobs are also expected to grow by 9 percent in 2014.<sup>47</sup> By contrast, coal industry jobs have been on the decline, particularly in the mining sector, due to increased mechanization and lower demand for dirty energy. Clean energy is the job creator for Illinois'

“My family grew up on the Illinois River. We own a campsite in Pekin and every summer we spend the days boating, fishing, water-skiing and swimming in that river. We always saw the smokestacks in the distance, but I never thought the E.D. Edwards coal power plant could be putting my family’s health at risk. We always used to take the kids to waterski by the “S-curve” in the river by the plant because it was where the water was most calm.

If I had known what the plant puts into the River, I never would have put my children in that water. While Dynegy takes a bet on dirty coal and passes the health costs to my fellow Peoria-area residents, all the data show technologies like wind and solar continue to drop in price. Wind and solar don’t send mercury and arsenic into our drinking water supplies. I’m ready to work with my community to make the change from coal to clean energy.”

- ROBIN GARLISH, PEKIN, IL



future, and sectors ranging from manufacturing to construction, engineering, and sales stand to benefit as Illinois transitions from a fossil fuel dominated past to a clean energy economy.

Increasing our use of clean energy means burning fewer fossil fuels, which provides a clear list of environmental benefits. In Illinois, clean energy has eliminated millions of tons of air and water pollution each year. This translates into cleaner drinking water, fewer asthma attacks that end in the Emergency Room, healthier families and a stronger workforce. Clean energy is also a key part of curbing climate change to ensure we do our part to pass along a safe environment to future generations.

According to the Illinois Power Authority, renewable energy has saved consumers millions of dollars by helping lower wholesale electricity prices. The Illinois renewable portfolio standard has saved consumers \$177 million since 2007.<sup>48 49</sup> In addition; energy efficiency programs are popular in Illinois. As consumers buy more energy efficient appliances, better insulate their homes, and learn how to use electricity more efficiently, we have realized big savings while helping eliminate wasteful energy consumption.

Consumers across the state of Illinois are clamoring for more clean energy. Though a process known as “community aggregation,” 91 communities in Illinois have chosen to purchase 100 percent renewable electricity for their residents. These communities were able to leverage their group buying power to receive renewable electricity while also reducing rates and pollution. Illinois has far more towns and cities purchasing 100 percent renewable electricity than any other state in the country. The 91 communities that have transitioned to 100 percent renewable electricity represent more than 1.7 million individuals, and more than six terawatt hours of electricity, a reduction in climate disrupting pollution comparable to taking more than one million cars off the road.<sup>50 51</sup>

As we phase out risky coal-fired power plants in Illinois, clean energy is ready to take its place and consumers are ready and eager for more.

### **FROM COAL TO CLEAN - RESPECTFUL TRANSITION FOR WORKERS AND COMMUNITIES**

As Illinois moves from fossil fuels to clean energy, ensuring a fair and just transition of the workforce is critical to success.

A “fair and just transition” means that the affected workers, their unions, and the communities they support are equal partners in a managed transition. It means that affected workers receive job security and livelihood guarantees as part of the transition. It means that every level of government and business is directly engaged in an all-out effort to maximize investments in economic development, provide workforce training, and create lasting, good jobs that strengthen the economy and sustain working families. A just transition means the corporations responsible for harmful pollution are accountable for cleaning it up so that communities are left with clean water and sites that can be transitioned to other uses. It means environmental groups and unions remain strong allies, and continue to work together towards a good future.

Clean energy is a great place to begin, as renewable energy and energy efficiency investments create far more jobs per dollar spent than fossil fuels, including

natural gas. Specifically, a clean-energy investment agenda generates more than three times the number of jobs within the United States as spending the same amount of money within the fossil fuel sectors.<sup>52</sup> The clean energy sector is growing at a rate of 8.3 percent, nearly double the growth rate of the overall economy.<sup>53</sup>

If done properly, the clean energy retooling of our economy will lead to a massive expansion of good jobs, providing one of the biggest opportunities for growth of the labor movement over the next generation.<sup>54</sup>

For example, in Washington State, environmentalists worked with unions and communities to ensure that a multi-million dollar transition plan for the workers was included in the plans to retire the Centralia Coal Plant.<sup>55</sup>

This fair and just transition can be achieved, but only if we start now. Our elected officials need to play a leadership role in convening the conversations to move this vision forward.

## SECTION 5:

# WHERE DO WE GO FROM HERE?

## ✓ A Checklist of Recommendations for Local Decision Makers

Whether you are motivated to act because you believe corporations should be responsible for their pollution, or you’re committed to help clean up the air so your children, grandchildren, friends and neighbors can breathe easier, or you’re determined to ensure Illinois doesn’t join the ranks of Tennessee and North Carolina on the list of horrific coal ash disaster sites, the time to act is now. Dynegey is still new in town, and Illinois residents and decision-makers should demand action to responsibly phase out its aging and risky coal fleet. At the same time, we need to work to ensure that our future is powered by clean and renewable energy.

Here are just some of the things you can do to take action:

### □ STAND UP FOR PUBLIC HEALTH AND A CLEAN ENVIRONMENT

Dynegey purchased Ameren’s fleet of aging coal plants knowing full well that many lack modern pollution controls. Few have scrubbers to reduce asthma-inducing SO<sub>2</sub>, selective catalytic reduction to reduce

smog-forming NO<sub>x</sub>, or baghouse filters to reduce choking particulates. Even fewer have closed loop cooling water systems to eliminate thermal events and toxic water pollution, or dry coal ash handling systems and lined ash landfills to reduce the catastrophic risk of a coal ash disaster. None have a way of controlling carbon dioxide emissions which are fueling global warming and threatening the entire planet.

Dynegey’s coal plants are often the largest sources of air and water pollution in the communities where they reside. The communities that surround these plants have been sacrifice zones for decades, missing out on round after round of technological improvements because of owners unwilling to reinvest profits and bring these plants up to date.

Dynegey seems unlikely to do things differently. Dynegey’s no-money-down acquisition of Ameren’s dirty coal fleet was structured to shift risk away from the company and to our communities. Many of the facilities are extremely outdated and the hurdles to

bringing them up to date are simply too high. If life-saving pollution controls were not installed to prevent hundreds of premature deaths when the economy was roaring, it is hard to believe it will happen now.

We, however, can do things differently this time. Regulators at the state and federal level are finally taking steps to clean up the dirty legacy of coal-fired power plants. These new regulations should not be watered down or delayed to extend the lives of power plants that should have closed years ago. Join us in supporting state and federal regulations that end the cycle of local communities bearing the direct costs of coal-fired power while others reap the benefits.



**Elected officials, please begin working directly with Dynegy and state and federal environmental agencies to ensure there is a responsible plan to clean up the legacy pollution from decades of coal plant operation in vulnerable host communities across the state.** Stand with your community to ensure it's not Dynegy's next sacrifice zone.

#### **□ PROTECT OUR WORKERS, TAX BASE, AND COAL PLANT SITES WITH A JUST TRANSITION PLAN**

Dynegy's economically distressed assets put communities and plant workers at grave risk. Proactive transition planning will help protect local communities and their economies. A just transition will make the affected workers, their unions, and the communities they live in equal partners in a well-planned, carefully negotiated and managed transition. An inclusive,

transparent process will be beneficial for everyone.

Elected official and community leaders should ask Dynegy for certainty about these plants' long-term fate. It will be essential to engage stake-holders in a transition process to explore meaningful opportunities for retraining of the plant workforce as well as revitalizing the site with an eye toward creating local jobs and an on-going tax base. Many of these communities have experienced abrupt closures of industries in the past. By starting this conversation early, and committing meaningfully to it, we are hopeful that everyone can work together to ensure a more thoughtful approach to a transition away from fossil fuels.

**Create the space for this conversation to happen. Convene a roundtable with local elected officials, labor leaders, and environmental advocates to begin the conversation about just transition.**

#### **□ CHAMPION JOB-CREATING CLEAN ENERGY**

Illinois' commitment to clean energy can create even more jobs and economic investment and growth, and push dirty and expensive coal-fired electricity out of our energy mix along with its air and water pollution.

Illinois is already a leader in the clean energy sector. A recent study by Clean Energy Trust found there are nearly 100,000 clean energy jobs across Illinois, including jobs in solar, biofuels, efficient heating and cooling, LED lighting, smart meters, advanced batteries and many other technologies. Illinois has also become the heart of wind industry in North America – with fourteen wind energy companies' headquarters or regional offices located in the state. These are competitive, well-paying jobs, and these sectors will continue to thrive as we move beyond coal.

**Champion the clean energy economy in your community by hosting a clean energy jobs forum, roundtable, or job fair.** Invite community leaders, engaged citizens, and clean energy business in your region to discuss how your community can take advantage of the clean energy potential in Illinois.

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