

## T H R E E

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### *Inside the Swarm*



**ON A CHILLY NIGHT** in February 2007, a criminal justice consultant named Nancy LaPlaca sat on a bare bench under the bright lights of the Denver County Jail. Four other women sat beside her, two arrested for public inebriation, a third brought in on suspicion of crack possession, the last for driving while intoxicated. In her day job, LaPlaca had seen many such rooms. But now she was on the wrong side of the bars.

LaPlaca had begun the evening at the Denver Marriott, relaxing in the hotel bar with friends after the close of a small conference that she and her group, Coloradoans for Clean Energy, had organized for activists from across the country who are opposing new coal-fired power plants. Next to her chair she had carefully placed her “NO NEW COAL PLANTS” sign so that it faced the wall, after a request to do so from the hotel manager. A utility industry conference was taking place in the same building, and the manager was eager to avoid offending the executives and engineers in attendance. But as LaPlaca prepared to leave, she briefly turned her sign so that it was visible to the bar.

“Suddenly,” she later recalled, “there was this 250-pound policeman in my face demanding to talk with me privately. I told him that whatever he had to say, he could say in front of my friends. And that’s when he grabbed me.”

LaPlaca told me her story over the phone as she prepared to face a judge on charges of trespass and disorderly conduct. I had found her through the No New Coal Plants listserv that Mark Trechock had recommended to me.

This useful watering hole had been initiated in April 2006 by Philadelphia organizer Mike Ewall. Ewall founded the group Energy Justice Network in 1999 and has organized listserves on issues ranging from tire incinerators to nuclear power. Whatever the topic, the elements of each listserv are identical: messages from any member are forwarded to the entire group, responses may be directed back to either the group or the original author, and archives of group messages are kept on the Energy Justice Network Web site.

For the first few months, messages among No New Coal Plants participants were few and far between. But by midsummer 2006, Ewall had recruited several dozen members, and the listserv had taken on a life of its own. Over the next year, it grew to include 140 people, a membership that was diverse as well as far flung. A few members, such as Matt Leonard of Rainforest Action Network in San Francisco and Ted Glick of the U.S. Climate Emergency Council in Takoma Park, Maryland, were on staff at national environmental groups. Most, however, were involved with small, locally based, mainly rural groups. Typical among these was Greg Howard, an attorney with the nonprofit Appalachian Citizens Law Center, a law firm in Prestonsburg, Kentucky, that represents miners suffering from black lung disease; Mano Andrews of the Western Shoshone

Defense Project in Nevada and the Save the Peaks Coalition in Arizona; and Leslie Glustrom, a biochemist in Boulder, Colorado, opposing Xcel Energy's Comanche 3 coal plant.

As I became better acquainted with participants in the No New Coal Plants listserv, it became clear why the solidarity and shared resources mattered so much. For those living in areas that were already heavily affected by mines and power plants, the struggle was not about the future of the planet. They were fighting for their homes, livelihoods, and health—or even all three at once. One such person was Elisa Young, who was battling to save the farm in Meigs County, Ohio, that her ancestor George Roush had received in compensation for his service in the Revolutionary War. There were already four coal-fired power plants within eyeshot of Young's house, and five more plants were planned for the area. Her group, Meigs Citizens Action Now!, was dealing with the daily nuisances and hassles of existing coal development—blasts, noise, toxic emissions, truck traffic, coal plant waste, contaminated water—while simultaneously working to stop new plants, mines, and waste disposal sites.

To accomplish the latter, Young traveled the state, attempting to persuade cities that were slated to be purchasers of the power from a 960-megawatt coal plant being proposed by American Municipal Power to be wary about the economic consequences of signing on. Like a latter-day Virgil guiding Dante through the circles of Hell, Young also made time to show visitors the various sorts of devastation inflicted on Meigs County: strip mines, coal conveyor systems, haul roads, transmission lines, waste pits, all of which had been affixed to a once bucolic setting of wooded hills, country church graveyards, cornfields, and cattle pastures. Six of Young's neighbors had already died

of cancer, and Young herself was being treated for a precancerous condition.

Another member of the listserv who was no stranger to coal development was Indiana photographer John Blair, whose group, Valley Watch, monitored developments along the heavily polluted Ohio River industrial nexus conjoining the states of Indiana, Kentucky, and Illinois. Valley Watch was thirty years old, and many members of the listserv leaned on Blair's long experience. A typical newcomer to environmental activism was Tom Karas, a contractor who built log cabins in northern Michigan. Karas knew his community intimately, and he had already made tremendous progress in mobilizing local citizens in opposition to a project slated for his county known as the Wolverine Clean Energy Venture.

For all participants in No New Coal Plants, the listserv provided a variety of support: research assistance, clipping service, and watercooler. Postings announced conference calls, floated ideas for group projects, celebrated victories.

"This is hard work, with low pay and lots of frustrations along the way," Alan Muller told me. Muller was a former chemical engineer who now served as the one-man staff for Green Delaware. He said, "I can't stress enough the encouragement factor as a main value [of the listserv]."

In some ways the No New Coal Plants listserv actually fit the profile of a single-issue environmental group, if "group" is the right word for an entity with no office, no board of directors, no letterhead, no bank account, no organizational structure. But the term "swarm" would better reflect the anarchic quality not just of the listserv itself but of the movement it represented.

As fighting forces, swarms both preceded and eventually vanquished the orthogonal ranks of legionnaires that forged the

Roman Empire. In a swarm, the emphasis is not on discipline, experience, and orderliness but rather on fighting spirit and individual initiative. Swarms are known for their tactical flexibility, sometimes using guerrilla-style harassment, as did the farmers who routed the British at Lexington and Concord, other times prevailing with overwhelming numbers in the manner of the Arapaho, Lakota, and Northern Cheyenne fighters who overran the U.S. Seventh Cavalry at the Little Bighorn.

The contrast between No New Coal Plants and Big Coal was obvious, but the contrast between such low-profile, decentralized entities and the large national groups typically identified with the environmental movement was equally striking. Typically based in Washington, D.C., or New York and sporting annual budgets in the tens of millions of dollars, these “Big Green” groups, not unlike the corporate and governmental entities they oppose, are hierarchical, highly organized, and reliant on trained and seasoned attorneys, scientific experts, and lobbyists. Yet the “Twigs,” a name some small-scale activists used to distinguish themselves from Big Green, had lately taken more militant positions on key aspects of the global warming controversy.

By the time I first began following the anti-coal swarm in the spring of 2007, the difference between the grassroots groups and Big Green had blossomed into a full-blown argument over a pressing issue facing the movement: whether to support a new technology with the ungainly acronym IGCC, for integrated gasification combined cycle.

Rather than create electricity by burning coal, IGCC plants first convert coal into syngas, a mixture of carbon monoxide and hydrogen, then burn the gas. The technology for coal gasification is not new. It was initially used to power the German air force

during World War II. More recently, the apartheid regime in South Africa, isolated economically from the rest of the world, had used the technology to supply some of its fuel needs. The use of gasification for electrical generation is relatively recent. Four such plants operate in Europe and the United States, all built with government subsidies. Because it involves converting solid fuel into gas prior to combustion, IGCC technology is better suited to capturing waste products than conventional combustion technology. As much as 88 percent of the coal's carbon dioxide can be captured in an IGCC plant, along with 99 percent of its sulfur oxides and particulates and 95 percent of its mercury. Once the carbon dioxide has been removed from the exhaust stream, it can be liquefied under pressure and injected into deep underground formations. In the spring of 2007, over a dozen IGCC plants were under development in the United States. Leading the pack was Eurora Group's Cash Creek facility, slated to begin operating in Kentucky as early as 2011.

For Appalachian groups whose greatest concern was the destructive mining practice known as mountaintop removal, the fact that IGCC plants would still entail the destructive mining of coal was already a deal breaker. Other grassroots groups had additional concerns about the technology, not trusting that carbon capture and storage could be safely carried out, or believing that the entire enterprise was something of a fig leaf allowing coal companies to continue doing business as usual.

Four prominent groups did support IGCC—the Natural Resources Defense Council, the Environmental Defense Fund, the National Wildlife Federation, and the Clean Air Task Force. Underlying the decision of these groups to work with the coal industry in building the new plants was a brutal calculation by experienced leaders of the larger groups, most prominently

David Hawkins, director of the Climate Center at the Natural Resources Defense Council. Hawkins was one of the most senior figures in the environmental movement, having joined NRDC in 1971. He told other environmentalists they should find ways to leverage the political strength of the coal industry rather than continually hoping they could defeat it. On a visit to Australia, he told journalist Bob Burton, “What we are exploring is whether the political power that is represented by the fossil energy industry can actually be used to move the process forward rather than have them in their traditional role of opposing action.”

In April 2007 Hawkins told the Senate’s Energy and Natural Resources Committee that “we will almost certainly continue using large amounts of coal in the U.S. and globally in the coming decades.” For that reason, he concluded that “it is imperative that we act now to deploy [carbon capture and storage] systems.”

A key objection to IGCC involved the efficacy of pumping carbon dioxide underground for indefinite storage. While such pumping had been done to facilitate oil extraction, it had never been attempted at the immense scale that would be required to render the coal industry climate-friendly. According to a study by engineers at Massachusetts Institute of Technology, capturing and compressing just 60 percent of the carbon dioxide produced by U.S. coal-fired power plants would require a new pipeline network big enough to move 20 million barrels of liquefied carbon dioxide each day from power plants to suitable underground storage sites, a volume equal to all the oil piped daily throughout the country. The Department of Energy estimated that by the end of the century, the amount of liquefied carbon dioxide needing to be permanently sequestered would be enough to fill Lake Erie twice over or cover the entire

state of Utah with a blanket of liquified carbon dioxide 14 feet thick. Storage sites would have to be honestly administered, closely monitored, and tightly sealed. The demanding technical requirements led journalist Jeff Goodell to write that “the notion of coal as the solution to America’s energy problems is a technological fantasy on par with the dream of a manned mission to Mars.”

A more straightforward concern about IGCC was its economic feasibility. The cost of building such plants was expected to be around 40 percent higher than conventional coal plants. And the cost of operating them would also be higher, since huge amounts of power are needed to separate and liquefy carbon dioxide, then pipe and pump it underground. In all, each plant would have to burn about 25 percent more coal to generate the same amount of electricity for market. Once those expenses were totaled up, this way of using coal seemed headed toward being more costly than electricity generated by solar or wind power.

During the spring of 2007, members of the No New Coal Plants listserv used the network to develop a rapidly growing information base on the projected costs of IGCC. Among those urging research into the costs of IGCC, the most vocal was Carol Overland, an attorney based in Redwing, Minnesota. After working as a truck driver for over a decade, Overland sold her house in the early 1990s to finance a law degree from William Mitchell College of Law in St. Paul, Minnesota. She went to work representing small towns and local groups in transmission-line permitting and other utility-related cases. As a girl, she had played “power engineering office” on a desk made from a red crate, imitating her father, a mechanical engineer who had designed power plants for Great River Energy and other utilities.



Now that childhood game had turned into a career represented by floor-to-ceiling shelves constructed from two-by-fours and filled with power company feasibility studies.

Overland was one of the earliest participants on the No New Coal Plants list and clearly one of the brightest. She had a talent for exposing the financial weak spots of proposed power plants, and she coached others on the list: “If you want to kill a power project, focus on economics.”

Overland was applying that advice to the Mesaba Energy Project, a massive IGCC plant being proposed for Bovey, Minnesota, by independent power generator Excelsior Energy. The plant would use coal shipped by rail from Wyoming’s Powder River Basin. The coal would be converted to gas and then the gas burned to make electricity, which would be sold to the customers of Minnesota utility Xcel Energy.

For all the claims that Mesaba was a technological step forward, the real creativity of the project seemed to lie in Excelsior Energy’s ability to attract government subsidies. Like a confidence man playing a wealthy widow for a big score, the promoters of Mesaba, led by husband-and-wife team Tom Micheletti and Julie Jorgensen, both former employees of Xcel Energy, planned to leverage small grants from the body politic into bigger ones. This led to the choice of a location for the project: the far northeastern part of Minnesota known as the Iron Range. The Iron Range lacked the geology needed for storing liquefied carbon dioxide, but as a region left economically depressed after a century of boom-and-bust iron extraction, it contained something more valuable to Mesaba’s developers: state business development subsidies.

In 2002, the Micheletti/Jorgensen team picked up their first \$1.5 million grant from Iron Range Resources, a state

development agency funded by taxes on taconite mines. The next year, the developers secured an additional \$8 million from Iron Range Resources, a \$10 million grant from Minnesota's Renewable Development Fund, and a \$36 million grant from the federal Department of Energy.

The big money remained to be secured: a federal loan guarantee of up to \$1.6 billion and federal tax credits of up to \$130 million. In the summer of 2005, the developers decided to change their preferred location from an abandoned mine site near Hoyt Lakes to a scenic area of lakes, forest, and wetlands a hundred miles to the west in Itasca County. The move prompted a frenzy of organizing, as local citizens met in living rooms and public halls to share information and hear speakers, including project sponsors and project critics. They formed Citizens Against the Mesaba Project (CAMP), set up a Web site, and began networking with other grassroots groups around the state.

As Overland watched the Mesaba Project unfold, what galled her most was how the developers had managed to pass it off as a "green" project, not only to members of Minnesota's political establishment but also to major environmental groups in the state. Again and again, Overland pointed out that use of the new IGCC technology in this instance was pointless, since Minnesota lacked the type of geological formations needed for pumping carbon dioxide underground. Many grassroots environmentalists in Minnesota had shifted to opposing the plant, but the matchup remained an improbable one: Overland with her fruit crates against a number of well-connected members of the Minnesota political establishment.

Yet Minnesota is famous as a state of underdogs and mavericks. It's the home of Jesse Ventura, the professional wrestler who

became governor, and Al Franken, the comedian turned U.S. senator. There's a sort of Scandinavian puckishness afoot that likes to tweak pretensions and level the field. From conversations off the official record, Overland knew that not everyone inside the regulatory agencies charged with reviewing the Mesaba case was delighted with the plan. They weren't willing to front the argument—that would still be up to the activists—but at least the arguments of Overland and other opponents would get a proper hearing.

To bolster Overland's case, other No New Coal Plants participants supplied her with internal reports on coal prepared by Wall Street investment banks and with feasibility studies performed in other states. These showed mounting evidence that IGCC might not be the wonder technology that its proponents seemed to think. Essentially, an IGCC plant was a refinery joined at the hip with an electricity-generating plant. That posed a problem whenever one or the other system was not working properly. Refineries in particular tend to be fussy and complex, requiring constant adjustment of pressures, temperatures, and catalysts. This meant that a factor often touted in favor of coal—its baseload reliability, especially compared to solar and wind power—could not necessarily be assumed. Moreover, whenever an IGCC plant shuts down, a long restart period is necessary, during which emission levels are typically far higher than the usual specification for the plant.

On top of the cost overruns typically associated with new technologies, the planners for Mesaba were confronting an industry-wide escalation in building costs. Rapid economic growth in China and elsewhere was putting pressure on materials such as concrete and steel. Skilled workers were in short supply. Engineering costs exceeded expectations. While the

U.S. Department of Energy had originally placed the cost of Mesaba Unit 1 at \$1.18 billion, by May 2006 that number had nearly doubled to \$2.2 billion, not including necessary transmission line upgrades or the needed infrastructure for carbon capture, transportation to a location with suitable geology for carbon sequestration, underground injection, and long-term monitoring.

The more information Overland received, the more she became convinced that an aggressive assault on the cost estimates for Mesaba was the key to derailing the project. In order to build the plant, Excelsior Energy needed the state of Minnesota to approve a power purchase agreement (PPA) between Excelsior and Xcel. In a brief to the Minnesota Public Utility Commission, Overland maintained that Mesaba should not receive the PPA because it did not qualify as a “least cost project” under Minnesota’s statutes; given the revised cost projections, Mesaba’s electricity wouldn’t be as cheap as alternative sources. Having submitted her briefs in quadruplicate, she hunkered down to wait for the regulators to make their first big decision.

In April 2007 the decision was announced. Agreeing with Overland and Citizens Against the Mesaba Project, a panel of administrative law judges recommended to the Minnesota Public Utilities Commission that the PPA be denied on economic grounds.

“Dead, dead, dead!” a jubilant Overland told the *Star Tribune*. “It was on life support before. The plug has been pulled and we’re waiting for the inevitable.”

Mesaba wasn’t actually dead yet. Even a year later, the project’s backers continued to pursue subsidies and permits. But the aura of inevitability that had once surrounded the project was gone, and now the sponsors were on the defensive. Within the anti-

coal movement, the victory, however tentative, was regarded as highly significant. If a project with so much backing could be successfully challenged, perhaps projects elsewhere were more vulnerable than had previously been assumed.

