

Siting Struggles: The Unique Challenge of Permitting Renewable Energy Power Plants

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The experience of the three Pacific Coast states provides ample lessons on the strategies that need to be adopted to survive opposition from those motivated by "NIMBY," environmental values, and opportunism.

Robert D. Kahn

Renewable energy resource development in the United States has lagged far behind expectations.¹ Difficult barriers stand between Americans' hopes and the realities of bringing renewable generation on-line. One poorly understood barrier is the unique challenge of securing the permits required to build wind, geothermal, and biomass power plants.

The West is a working laboratory in renewable technologies at different stages of development and acceptance. California hosts a diverse array in number and variety of operating power plants,² while renewables are just beginning

to be developed in Oregon and Washington. In these three Western states, all varieties of renewable power plants have undergone review by all levels of government: federal, regional, state, and local.

The sponsor of a power plant project has a straightforward objective: obtain all required government approvals in a timely manner while limiting vulnerability to a legal challenge. This article argues that renewable developers have a more difficult time securing their permits than fossil fuel project developers have obtaining theirs. While no one wants it to be too easy to permit a power plant

regardless of what kind of resource it uses, the main question posed by this article is: Do we really want the permitting process to be harder on renewables than its competition?³

I. Siting

A. Site Selection: Setting the Stage

Site location determines which governmental jurisdictions will review a proposed power project. The natural environment at the site will define the potential impacts project sponsors will need to mitigate. The site will largely determine the constituencies that rally for and against the development. Site location has more to do with a renewable energy project's ultimate success or failure than any other single factor. But in developing a renewable power plant, it is the site that chooses the project, not the reverse.

This lack of flexibility dramatically distinguishes the development of renewable energy projects from power plants fired with natural gas, coal, or petroleum coke. While the sponsor of a renewable project may have several candidate sites, there are far fewer options overall than what is available to a fossil fuel developer. A gas-fired project developer, for example, can select a site practically anywhere along a natural gas pipeline and/or electric power line. Renewable energy developers enjoy no such advantage.

B. Resource Risk and Site Selection

A renewable energy power plant is defined by its resource.

There is no point in installing a wind turbine, geothermal power plant, solar cell, or biomass combustor unless the resource has been proven. The first step in development is to evaluate the resource at the prospective project site.

The stakes are high. Several renewable projects, large and small, have blundered in their resource assessments. There are ample examples for renewable

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technologies where incomplete analyses led to failed or underperforming projects.

One cautionary tale of faulty resource acquisition is Cal-Energy's Newberry Crater Project. The company spent millions of dollars over seven years developing the 30 MW project, south of Bend, Oregon, only to find after completing a tortuous permitting process (required before exploratory drilling could begin) that the geothermal resource fell below commercial standards. The painful episode was the renewable energy equivalent of an oil wildcatter's "dry well."

C. Infrastructure: To Have and Have Not

The term "greenfield project" refers to a new industrial facility built on undeveloped acreage. But not all greenfield projects are alike, and there are marked differences between what "greenfield" means to a fossil fuel developer and what it means to a renewable developer.

The essential infrastructure for a proposed fossil fuel power plant lies underground nearby or hangs overhead. Roads, water supply, and drainage can be easily built if not already available. Moreover, the site will likely be located in an industrially zoned neighborhood or an area earmarked for future industrial use.

"Greenfield" has a more literal meaning for renewable power plants. Wind projects are typically built in rural locations at undeveloped sites. Geothermal power plants are built either in remote areas or rural, open spaces. Biomass plants are sited adjacent to lumber mills or in rural areas with easy access to combustible agricultural by-products and urban wood wastes.⁴

These locations often lack proximity to electric transmission and even the most rudimentary infrastructure, such as roads, drainage, or water and sewer connections. The lack of physical infrastructure adds dramatically to the costs of development. First, securing access to electric transmission can be problematic. Second, industrializing open space is risky.

D. Industrializing Open Space: Adding Risks to Renewable Development

Remote areas are open spaces; by proposing to fill them, renewable developments ignite tensions which elevate the risk of official denial.

Fossil fuel power plants are typically sited in industrial zones. While the choice of an industrial neighborhood is no guarantee of success, developers can expect grudging acceptance from residents who have grown used to the established land use. A project which fits into a preexisting industrial mold is not likely to be accused of ruining the landscape.

A renewable energy project is not as lucky. Americans put a high value on wilderness and open space. Sparks fly when lands viewed as public viewscapes (even if they are not publicly owned) appear threatened. Unfortunately, these lands are where developable renewable resources are to be found. As Paul Gipe observes, "renewables migrate toward so-called marginal lands that . . . are not lands officially designated as parks, preserves or areas of outstanding beauty, but are [still] lands that offer solitude."⁵ In addition to traversing this spiritual dimension of open spaces, renewables are likely to fall under the jurisdiction of government stewards of federal lands such as the U.S. Forest Service (USFS) or the Bureau of Land Management (BLM), forcing a federal review under the National Environmental Policy Act (NEPA).

E. Lead Agencies and Permit Reviews

Fossil fuel power plant sponsors enjoy an important siting advantage over renewables: they can, within certain parameters, select the government agency that will approve or deny their projects. Renewable energy cannot.

The permitting agency that reviews a power plant permit application is determined first by

Fossil fuel power plant sponsors enjoy an important advantage: they can select the agency that will approve or deny their projects.

the project's location and second, by its size. Location on federal lands and/or use of federal transmission results in a U.S. agency review. A project on private lands falls under city or county jurisdiction unless the proposed plant's size pushes it into state jurisdiction.

California, Oregon, and Washington retain centralized siting authority. Oregon asserts its jurisdiction the furthest, covering *all* projects 30 MW and above. In California and Washington, state reviews are limited to thermal power plants over 50 MW and 250 MW, respectively. In today's marketplace most fossil fuel

projects are reviewed under state jurisdiction.

Developers care which agency manages their permitting reviews and look carefully at the siting regime their projects will face. If a developer concludes that navigating one permitting authority will be problematic, an alternate jurisdiction may be sought (see Section III, D, "Different Venues, Different Outcomes").

Three qualities will influence whether a developer considers a lead agency more or less desirable: politicization, professionalism, and regulatory certainty.

F. Politicization

Siting reviews are influenced by political pressure. The degree of politicization is driven by who grants or denies the permit. If elected officials are responsible for the process, it is more likely to be politicized. If civil servants are "in charge," the regulatory review will be less so. A city councilman or county commissioner can lose his or her job by reaching unpopular decisions; a bureaucrat will more likely keep his or her position whatever the outcome.

From a power plant developer's perspective, politicization isn't necessarily undesirable. If leaders of the host community support the proposed project for its property tax, job creation, and other perceived benefits, the developer will prefer to be reviewed by an elected board. But if the community is neutral, or includes influential constituencies that may oppose the project, another venue will be preferable.⁶

Selecting a desirable venue is not an option for most renewable energy developers. With their choice of site limited by proximity to their resource, wind and geothermal developers must navigate—for better or worse—either a federal proceeding or a local permit review led by elected officials.

Siting reviews conducted at the state level in Oregon, Washington, and California are directed by state civil servants, overseen by appointed decisionmakers. In Oregon and California, appointed commissioners approve or deny project applications with no avenue for appeal. Under Washington State statute, the governor endorses or rejects recommendations made by the Energy Facilities Site Evaluation Council (EFSEC).

State permitting is advantageous to power plant developers because state proceedings are removed from local electoral politics. State permit reviews are never simple and are always costly. The quasi-judicial nature of the proceedings adds to their length, and obtaining licenses may hinge on costly mitigations. Still, a state proceeding offers a degree of time certainty and an atmosphere of fairness often absent at the local level.

G. Professionalism

Professionalism is another defining quality which influences the quality of regulatory agencies. In general, local governments lack the adequate resources to review power plant

projects. Moreover, a local jurisdiction will probably never have dealt with a power plant siting before. State bureaucrats are better equipped to manage the task. They know what questions to ask, set appropriate expectations, and are experienced in “stage managing” the process.

A process managed by experienced civil servants will more closely adhere to statutory timelines, more conscientiously

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involve other affected agencies, and follow through on agreed-upon commitments. The more professional the lead agency staff, the more likely the permit process will be what it is intended to be: a rigorous and thoughtful weighing of a proposed project’s merits against its impacts.

Undergoing such a process is more likely for a large fossil fuel power plant under state jurisdiction than it is for a renewable undergoing local reviews. Not only are the state reviews likely to be handled by more experienced civil servants, the state bureaucrats will have established regulatory

policies and an institutional memory to guide the process.

H. Regulatory Certainty

Experienced power plant developers will half jokingly suggest that you rarely see the two words “regulatory” and “certainty” in the same sentence. “Certainty” as understood here begins with time certainty. When a permit review is managed with a firm deadline it will nearly always offer certainty in other respects as well.

The one venue which comes closest to offering time certainty for power plant project developers is state centralized siting reviews. The siting statutes in each of the three Pacific Coast states explicitly call for time certainty in permit reviews.

“Project development managers will complain about centralized [state-run] permit reviews,” observes Sacramento attorney John Grattan, who has navigated multiple projects through the California Energy Commission (CEC), “but in quiet moments they will confess that they prefer conducting their applications through the state. The reasons,” he adds, “are that the process, while costly, is predictable. Bureaucrats know how to avoid most surprises and they hate them nearly as much as developers do.”⁷

State reviews provide another important benefit. As “one-stop [permit] shopping,” they reduce exposure to regulatory double jeopardy developers might otherwise face. The result of this consolidated permit treatment is greater regulatory certainty in a quasi-

judicial atmosphere. There is ample room for intervenors, who can secure formal standing in the state proceedings, to direct inquiry and influence the outcome, but they must function in a neutral, nonpoliticized setting. Opponents' arguments will be heard on their merits, and while project sponsors may view the resulting mitigations as overcorrections, they are willing to adopt them if it is the price of a license.

Due to their size and statutory exemptions, renewable projects are rarely reviewed under state authority. In the regulatory game of roulette that they are forced to play, the lead agency will either be federal or local.

I. Regulatory Uncertainty

There is good reason, from a developer's perspective, to bypass federal review. While a federally managed process has pluses in that it is professionally administered, no one would choose a federal review under NEPA if it could be avoided. Many renewable energy power plants in the West have no choice.⁸

The primary challenge of a federal review is the close encounter with the Endangered Species Act (ESA) that accompanies it. The ESA has more influence on a federal power plant permitting review than any other single regulatory requirement. Enforcement of the Act is rigorous.⁹

The first level of ESA review in evaluating a project is handled by U.S. Fish & Wildlife Service (USF&WS) "field biologists." These civil servants exercise con-

siderable clout over a proposed power plant project on federal land, with the power to identify *any* potential impacts on endangered and protected species. The painful truth is that issuing an official biological opinion which could balance development with protection is a formidable task for wildlife professionals whose sole duty is to defend wildlife.

In one example, a USF&WS field biologist voiced concern about mer-

Federal agencies considering renewable project proposals will use the biological opinion process to protect institutional priorities.

cury levels in Medicine Lake, 1.5 miles from the site of a proposed Northern California geothermal power plant near the Oregon border. The staffer concerned with the health of protected bald eagles maintained that more data was needed, even though data already submitted met the agency's approved standard research methodology. The findings may have been unsatisfactory because they demonstrated that mercury levels in the lake's stocked fishery fell far below the discernible limit of five parts per billion.¹⁰

Another problem is the federal agencies considering renewable

project proposals will blithely use the biological opinion process to protect institutional priorities. For example, one power plant developer's innovative mitigation plan for a spotted owl habitat "taking" was vetoed by the Forest Service for fear that it would set an undesirable precedent for future timber sales. In other words, decisions on the renewable energy project may have nothing to do with the project itself.

Native American involvement is another dynamic of the federal review process. Tribes can become directly involved in any proceeding with a federal dimension. Many tribes' treaty rights grant them legal standing in decisions on federal lands. In the Northwest, for example, tribes can intervene in any action planned by the Bonneville Power Administration.

The federal permitting process requires abundant patience and "deep pocket" capital resources. While a record of decision is necessary in permitting a power plant project, it will not be sufficient; project sponsors must also secure permits (e.g., water quality, air quality, erosion control, etc.) from individual state agencies.

The other end of the permitting spectrum, local permit reviews, is no more manageable or predictable than at the federal level. Unlike state proceedings, there is no rigor or time certainty built into local reviews. All too often, the personal ambitions of elected officials maculate the process and/or the agenda is set by vocal project

opponents (see Section III E, “The Price of Inexperience”).

Local opponents can gain advantage by using and abusing the process to contest projects. As former Sonoma County California Supervisor Janet Nicholas has observed, “The best way to stop a project, whether it’s public or private, is to litigate an environmental document. The delays alone are enough to kill the project or cause its costs to rise to prohibitive levels.’ Nicholas estimates such abuses of the environmental process ‘might be 30 percent statewide.’”¹¹

II. Constituencies

A. Opposition: A Tally of Results

Proposed power plants, regardless of technology, site, or jurisdiction, will have to navigate a public review process and, in so doing, risk facing opposition. After all, siting reviews are open forums where criticism is not only accommodated, it is solicited. Sponsors carry the burden of proof; critics rarely have to meet any standard of accuracy in opposing a power plant project.¹²

Professor Rob Thayer of the University of California at Davis argues that the “Not in My Backyard” syndrome known as “NIMBY” is “. . . essentially a *de facto* siting or zoning regulation for all technological land uses. Local groups who are faced with the prospect of an unwanted technological facility locating next door take political steps to prevent that from happening . . .”¹³

NIMBY opposition has hurt

renewable development. While it is difficult to establish for certain, proposed wind farms that have failed to successfully navigate permit reviews in the three West Coast states total at least 350 MW.¹⁴ The number of biomass plants that failed to secure their permits is conservatively estimated at 150 MW.¹⁵ Estimates for derailed geothermal projects are not available.

Three different motivations char-



acterize project opponents: a NIMBY response, environmental values, and opportunism. The first two types of opponents share a desire to defeat or at least thoroughly mitigate a proposed project. The opponent with an opportunistic agenda wants the project to succeed as long as its sponsor pays a price.

While “NIMBY” is now widely used to refer to any grassroots opposition to infrastructure projects, it should refer to a very specific type of opponent with a mundane set of motives. According to Michael Edelstein, “NIMBYs seek personal protection, compen-

sation for loss, and the ability to return speedily to the normative consumptive American lifestyle.”¹⁶

A NIMBY opponent is—

- *democratic* with a small “d” since the NIMBY opponent exercises his/her political rights of self-determination to the fullest;
- *parochial* in that he/she is unconcerned with broad impacts—it’s only the proposed project in the immediate neighborhood which matters;
- *reactive* in that he/she is not generally concerned with planning or siting issues per se; and
- *not an environmentalist* (although he/she may adopt environmental arguments) since he/she embraces, as Edelstein notes, a consumer ethic.

In the early 1990s the leading wind energy developer of the time, Kenetech Windpower, encountered a heavy dose of NIMBY opposition over the first proposed wind farm project in the Northwest. The company envisioned installing an initial phase of 28 MW to serve three utilities on a desolate stretch of federal lands astride Rattlesnake Ridge in south central Washington (the ultimate buildout was to be 100 MW). Almost immediately after Kenetech debuted the project, it began hearing complaints about “visual pollution” from residents in the Tri-Cities, over 30 miles away. When the Yakama Nation Indian tribe joined the fray, Kenetech chose to move its project to an alternate site in the Columbia Gorge near Goldendale, WA.¹⁷

The second motivation for opposing a power plant applica-

tion is *environmental*. These opponents will vigorously fight a proposed project because they believe it degrades air quality, harms a threatened species, or pollutes a pristine landscape.

The opposition of the Nature Conservancy and Renewable Northwest Project was instrumental in encouraging Anadarko Petroleum Corp. to withdraw its application for a 22.9 MW geothermal power plant beside Lake Alvord, a high-desert geothermal resource area in southeastern Oregon, 50 miles north of the Nevada line. The groups' criticism was based on expected impact to a rare and protected fish species. Anadarko spent \$2 million over 15 years prospecting and leasing the site. It abandoned the project in the spring of 1996, explaining that it had failed to negotiate the terms of a power sale agreement with Portland General Electric (PGE). But the project's environmental flaws are what finally tipped the scale against Anadarko.¹⁸

The environmental critique delivered by the Renewable Northwest Project and the Nature Conservancy to bring down Anadarko's geothermal project is exceptional not so much in the outcome, but in the efficacy of the intervention. It is unusual for environmentalists to succeed purely on the merits.

The third and final motivation for power plant opposition is *opportunism*. Opportunists intervene in a facility siting case not to defeat or mitigate a project, but to extract a benefit from having opposed it; the permit process is a means to an end. Opportunistic

opposition is rarely exposed, but such opponents have proven to be *the* potent element in power plant siting reviews.

One example where opportunistic opponents contested a renewable energy power plant for economic gain was ThermoElectron Energy Systems' Woodland Biomass Energy Plant. The \$55 million power plant was among the last non-cogenerating, biomass-fueled



projects proposed in California. The sponsor, a Fortune 100 company that had built similar facilities in New England, sold the plant as an alternative to the traditional practice of open-field burning of rice straw, rice hulls, and orchard prunings. "The proposed biomass plant will help clean the air in the upper Sacramento Valley," the company maintained, "by replacing open-field burning of many agricultural wastes."¹⁹

ThermoElectron, which did not hire union contractors to build its plants, ran up against the Plumbers and Pipefitters No. 447 of the Sierra Nevada Trades Council. The

union hired a local law firm to contest the environmental impact report (EIR) and organized a front group, Citizens for Clean Air, which erected skull-and-crossbones lawn signs and left pamphlets attacking the plant as a "wolf in sheep's clothing" on residents' doorsteps. But the exercise was Potemkinesque, and no one representing Citizens for Clean Air ever testified at a public hearing. The sponsor secured its permits with unanimous votes from Woodland's Planning Commission and City Council. Thus, ThermoElectron ultimately succeeded where others did not. By contrast, the union forced another biomass developer to use a union contractor to build its 28 MW plant near Redding, California.

Whether opposition to power plants is motivated by NIMBY, environmentalism, or opportunism, once a controversy gets rolling, it is difficult to discern who is actually motivated by what. "Many observers have reached the conclusion that while NIMBY opponents of a particular project may mouth environmental arguments, they do not truly accept broader environmental ethics," writes energy journalist Arthur O'Donnell.²⁰

B. Support: Advocates and Observers

The distant quality of a power plant's "deliverables" make it essential to emphasize such tangible benefits as local job creation and tax benefits. Developers marshal data and craft messages to court the "host community."²¹

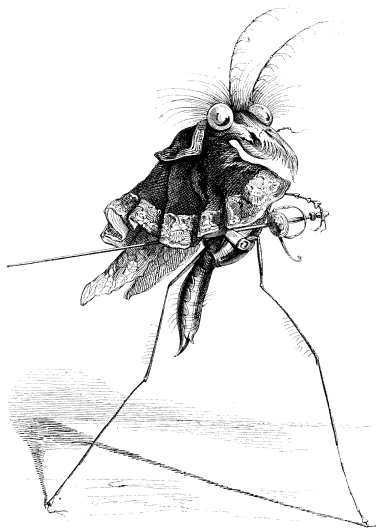
Renewable developers find local business interests friendly, but because their technology is unfamiliar more “get acquainted” time is required. For example, it took 10 years for the Palm Springs, California, leadership to accept wind power, but the city now promotes local wind farms as tourist attractions. Renewable developers rely on landowners with a vested interest in the project (e.g., lessors of wind rights or farmers supplying fuel to biomass plants) to link them to the community.

After the business community, the media ranks as the next “must have” constituency. Media coverage is not as influential in a fossil fuel project permitting as it is for a renewable power plant. Since fossil fuel plants are usually sited in urban areas, the media treats the application—even if it is controversial—as just another story among many. In contrast, renewable projects, located in rural areas, are a news bonanza for small-town editors. For example, the *Woodland Daily Democrat* published 45 stories about ThermoElectron’s biomass energy plant during its permit odyssey.

Fossil fuel developers readily alter their project designs or graciously contribute to local causes, if that is what it takes to keep their application moving. The “deep pocket” resources these companies can bring to bear are essential. In the big picture, co-opting nascent NIMBY opposition or placating potential opportunists is a fair price to pay for timely approvals.

The California Energy Commission approved Calpine Corp.’s 500

MW gas-fired Sutter Power Project in early April 1999 despite the considerable opposition Calpine faced in Sutter County. The price of approval was high. The *Sacramento Bee* reports that “along the way, the plant’s cost estimates, which started out between \$250 million and \$280 million, have risen to between \$270 million and \$310 million, figures which Calpine now says may be optimistic.”²²



In contrast, a creative effort by the Harwood family, sponsors of a 10 MW biomass power plant in the Mendocino County town of Willits, wasn’t enough to sway local opponents. The Harwoods offered to replace 800 antiquated wood stoves—over 20 percent of the town’s entire inventory—with state-of-the-art equipment. The plan would have “. . . significantly reduced [existing] pollution by offsetting over 500 percent of the [proposed] biomass plant’s PM-10 [particulate] emissions.”²³ But the \$400,000 proposal fell on deaf ears, prompting U.S. Congressman Doug Bosco to quip, “In the 1970s

it used to be ‘split wood not atoms’; now it’s ‘don’t split wood or atoms.’”²⁴

C. Environmentalists: Best Friends, Worst Enemies

Fossil fuel projects may face environmental opposition but their sponsors rarely expect support from environmental groups. On the other hand, renewable project developers are expected to have environmental backing.

Within a couple of years after wind, biomass, and geothermal power projects began rising off drawing boards, conflicts arose between project sponsors and the environmental advocates they expected to support them. “Wind power and other alternative energy sources are breaking up old alliances,” reported the *San Francisco Examiner*, “pitting pragmatists who want to make development livable against purists who’ve had enough of compromise.”²⁵

Ground zero in this nasty civil war is Altamont Pass, halfway between Stockton and Oakland, California. Seven thousand first-generation wind turbines had been installed before wind farm field staff, wildlife officials, and local planners realized that the Altamont was a prime habitat for raptors.

A study commissioned by the CEC determined that 39 golden eagles, a threatened species, were being killed annually by the Altamont wind farms.²⁶ The Altamont findings brought immediate consequences. Avian mortality became a *cause celebre* for every opponent of wind energy and recruited power-

ful new opponents including the Audubon Society.²⁷

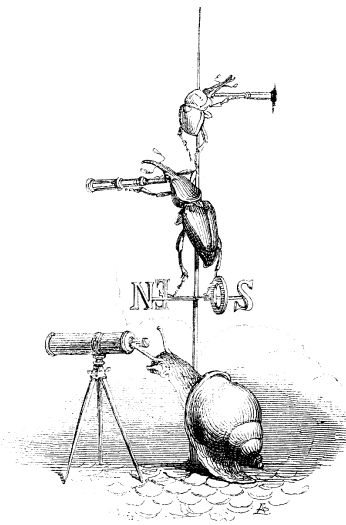
In spite of the wind industry's convincing efforts to reduce mortality rates, birds may not even be the core issue. "Bird kills are not the problem," Keith Axelson, conservation chairman of the Santa Monica Bay chapter of Audubon, told a reporter. "The wind power people will solve this problem in due time to everyone's satisfaction—except possibly mine." The real problem is the loss of open space, Axelson maintained, asking "... would you like a wind turbine in your backyard? I know I wouldn't."²⁸

The eclipse of a popular 1970s slogan may help explain why environmental "purists" oppose renewable energy projects. "Think Globally, Act Locally," runs counter to the activists' exclusive focus on particular visions and day-to-day practicalities. This telescoped commitment explains how one Montana environmentalist could assert that "... when you consider the wildlife and visual impacts [of a wind farm], it's every bit as bad as a coal-fired plant."²⁹

Environmentalism is as wide an ideological umbrella as any other. In fact, environmentalists are no more likely to agree on renewable energy than Republicans are on abortion.

The special problem for renewable energy developers is that environmental opposition is difficult to explain to the financial interests underwriting project development or the public officials empowered to license them. Bankers and bureaucrats experi-

ence cognitive dissonance when Audubon opposes a wind farm or the Sierra Club objects to geothermal power plants. For a public official, hearing environmentalists savage renewable projects is like witnessing a family feud. Decision makers expect environmental opposition to thermal power plants, but they are surprised to find wind, biomass, and geothermal projects under attack by erst-



while allies. No wonder environmentalists are more effective opposing renewables than fossil fuel power projects.

III. Conclusion

A. Lessons Learned in Renewable Power Plant Permitting

Energy facility siting on the West Coast points to the unique challenges developers encounter in permitting renewable energy projects.

The bankruptcy of Kenetech Wind power, the one-time industry leader, can be traced in part to

the burden of carrying development costs. The company's projects around the country took far longer than anyone anticipated. "Permitting costs," says Barrett Stambler, a former Kenetech vice president, "really bled us."³⁰

The obvious lesson is that "deep pockets" are required to develop renewable power plants. In permitting a project, every element (from legal to biological to public relations) must be adequately budgeted along with—as Kenetech found out—contingencies for inevitable delays.

Development consumes as much time as capital. The length of time it takes to permit an energy project can be astonishing. CalEnergy (now MidAmerican Holdings) has spent nearly 10 years developing the first geothermal project to serve the Northwest. Colmac needed eight years to permit its 50 MW biomass plant south of Palm Springs, California.

Only developers who face up to these challenges and plans realistically should sponsor projects. If an organization lacks the fortitude—or the resources—to sustain its projects through protracted review, it should avoid filing for a permit in the first place.

Successful permitting efforts have one very important characteristic in common: the project sponsors take a proactive approach. Successful renewable developers exceed what regulators and the community expect. They wisely take their projects beyond compliance.

Successful developers have learned the principle that "you

never get a second chance to make a first impression." The quality of the advance work, particularly in collecting baseline environmental data and cultivating community support, sets the tone for all that follows.

ThermoElectron followed this principle with its California biomass plants by making the case, early and often, that it would improve air quality. The Woodland community—farmers and business people, but also doctors and environmentalists—responded and supported the company when the Pipefitters intervened. While the effective introduction of a project is not a sufficient condition for success, it remains a necessary condition.

B. Which Way Environmentalists?

Renewable energy is rooted in the environmental movement. Thoughtful activists realized that new sources of non-nuclear, non-polluting energy were needed. Conflicts surfaced when real projects arrived testing the elasticity of environmentalists' idealism.

Zond Energy Systems' experience at Gorman, California, points to the irony of environmental opposition to renewable energy, especially now that a 960 MW gas-fired power plant has been proposed in view of the ridge Zond had hoped to develop.³¹ Would Zond's opponents have acted differently if the environmental impact of the gas-fired power plant emitting 1,000 tons of nitrogen and sulfur oxides yearly was considered alongside the wind

company's 77 MW wind farm? (See Section F, "The Gorman Episode.")

If it is important to accelerate renewable development in order to blunt global warming, and if it is environmental skeptics who are retarding that development, then now, more than ever, is the time to build bridges between environmental opponents to renewable energy and the sponsors of renew-



able projects. The exemplar in this work is the Renewable Northwest Project (RNP) of Portland, Oregon.

RNP supports developers that the group believes are building desirable projects. RNP backs projects which "... are the kind of development[s] that provides a significant net positive environmental benefit in the struggle to diversify the region's energy supply towards environmentally benign and sustainable power resources."³²

RNP's work is not unique. Other groups work closely with responsible developers. These pro-renewable environmentalists cajole their

business allies as much as they try to convince the environmental activists who oppose renewable power plants to look beyond their group's immediate focus.³³ RNP and its colleagues believe with the architect Peter Calthorpe that "environmentalists [must] learn to operate the steering wheel as well as the brakes."³⁴

C. A Glimpse at the Future

The jury is out on whether utility restructuring and green marketing will accelerate renewable energy development. The jury is in, however, on the difficulty of bringing real projects on line.

The key is for developers to do everything right: select sites carefully, assemble compelling evidence for their projects' benefits, mitigate generously, recruit support, work all applicable regulatory proceedings expertly. No wonder most renewable energy developers are now associated with major corporations.

On the East Coast, several significant wind and biomass energy projects have failed to survive contested permit reviews. And while wind developers' successes in the Midwest and Texas are heartening, their experiences offer little encouragement to biomass project sponsors (with their vastly different technology) or geothermal developers (whose developable resources are restricted to the West).

The one sense in which time works in favor of renewable energy is that developers learn how better to navigate permit reviews, how to mitigate environ-

mental impacts more effectively, and how to more convincingly make the case for their projects.

Developers have learned the hard way not to take environmental support for granted and to deliver on their promises. Meanwhile, the misbegotten effectiveness of environmental activists opposing renewable power plants can only be countered by forceful truth-telling.

Truth-telling is a role best played by other environmental activists who respect critics' special interests while looking at broader horizons. California renewable advocate V. John White asserts with respect to avian mortality, for example, that "when one steps back and takes a good look at the big picture, the levels of bird kills coming from wind turbines [are] completely dwarfed by the looming catastrophe of global warming, and the air pollution impacts associated with the status quo . . ." ³⁵

Is it too much to hope that if environmental opponents stepped back and took a wider view that they would alter their stance on renewable energy development? Does it really make sense that it's easier to permit fossil fuel power plants than renewable energy projects?

D. Different Venues, Different Outcomes

GWF Power Systems (GWF) underwent a tortuous permit review for its 20 MW coal-fired cogeneration power plant in the small California city of Hanford located in the southern San Joaquin Valley.

The project initially was unanimously approved in 1987 by the city council after an uncontested, expedited environmental review. Soon after, the state Attorney General's Office and Kings County Citizens for a Healthy Environment (an environmental group formed to oppose the project) sued the City and the developer under the California Environmental Quality Act (CEQA). The court upheld the



plaintiffs, forcing GWF to complete a full environmental study. When GWF came back with a comprehensive environmental impact report (EIR), the council approved the plant again, only this time on a contentious 3–2 vote. ³⁶

The city council's second vote triggered multiple lawsuits. The mayor was recalled and the newly constituted council tried to undo its predecessor's decision by passing a ban on coal burning. Nevertheless, GWF was ultimately able to bring the plant on-line after negotiating a court-sponsored settlement with its opponents. Among the concessions the devel-

oper granted was to withdraw applications to build similar plants in the area and to substitute petroleum coke for the coal it had originally planned to burn.

The situation the company faced 200 miles to the north could not have been more different from its Hanford experience. The stark contrast was set by the nonpoliticized venue GWF chose to consider its application: the Bay Area Air Quality Management District (BAAQMD). GWF smoothly permitted five 20 MW petroleum coke-fired power plants in Contra Costa County (east of San Francisco) at the same time it nearly failed in Hanford.

The difference was the BAAQMD. As a regional agency with a large, "hands off" board of directors, the air district was insulated from the intense public backlash that the City of Hanford faced. While there was opposition to the five GWF projects, the opponents could not erode the credibility of the air district, which managed the project EIRs. If the coke-fired plants had come before local Bay Area city councils as they had in Hanford, the outcome for the sponsor would have been the same or worse.

E. The Price of Inexperience

One permitting episode that points out the risks of local reviews is the case of Harwood Products' biomass power plant. The proposed 10 MW plant was to be built in the small Mendocino County city of Willits, California, 150 miles north of San Francisco. After two years of per-

mit reviews, the city's decision on the \$22 million project hinged on a game of cards.

On the eve of the final decision on the controversial project, city staff, based on verbal guidance from a staffer at the California Fair Political Practices Commission (FPPC), determined that four of the five members of the Willits City Council had conflicts of interest which prohibited them from voting on the project. Since the minimum quorum for the council's business was three, the FPPC official the city staff consulted suggested that two council members be "rehabilitated." Willits staff chose a random method to establish the quorum: playing cards.

"We thought dealing cards would be the easiest thing to do," City Manager Bill Van Orden told *Governing* magazine. "No one will say," *Governing* reported, "whether the outcome of the vote might have been different . . . but the truncated council, sitting as the planning commission, nixed the [biomass plant] proposal by a vote of 2-1."³⁷

F. The Gorman Episode

One especially contentious siting episode where a genuine environmental agenda became conflated with NIMBY and opportunistic motives was Zond Energy Systems' 77 MW windfarm project near Gorman, California.

Paul Gipe, in his book *Wind Energy Comes of Age*, recounts the 1988-89 episode in detail. He argues that ". . . while there were legitimate environmental concerns about [the project's] poten-

tial impact on the California condor, such concerns could be addressed, and Zond attempted to do so. But Zond's efforts were buried beneath an avalanche of hysteria . . ."³⁸

The project opposition was led by a NIMBY group of local residents organized as the Save the Mountain Committee. The two prime movers behind the opposition were the Tejon Ranch Company, a massive landowner with



real estate ambitions whose holdings fell into the wind project's viewshed; and Sally and Les Reid, two veteran, nationally prominent Sierra Club activists. "The Reids' opposition," Gipe writes, "may have had less to do with such lofty goals as protecting the condor than with [protecting] the view from their favorite overlook."³⁹

Zond lost a 5-0 vote at the end of a five-hour hearing before the Los Angeles County Planning Commission. Just before voting to kill the project, one of the commissioners pointedly observed, "you can't tell me that the money that has been spent [to oppose

Zond] comes strictly from 'the people.' It's coming from people who are concerned about, 'What is going to happen to my piece of property?'"⁴⁰

One project opponent, environmental activist Sandy Wohlgemuth, later acknowledged that the experience was a "moral dilemma" for environmentalists like himself. Wohlgemuth confirmed that the "committee's partnership with the Tejon Ranch made a difference . . . and that the Tejon Ranch is protecting its own interests," but, in the end, given his concern about wildflowers, views and the safety of the nearly extinct condor, he felt comfortable with the unusual alliance.

That sense of realpolitik meant Wohlgemuth was making no bets about the future. "If the Tejon Ranch owners in a year or two announce plans for a gigantic development on their 200,000 acres of grazing land," he concluded, "they will regrettably have to be opposed."⁴¹ ■

Endnotes:

1. See JAMES McVEIGH, DALLAS BURTRAW, JOEL DARMSTADER, AND KAREN PALMER, WINNER, LOSER OR INNOCENT VICTIM, Renewable Energy Policy Project, Research Report No. 7, March 1999.
2. By 1997, California had 5,100 MW of nonhydro renewable power projects online, representing fully 11 percent of the Golden State's overall capacity. See CALIFORNIA ENERGY COMMISSION, GREENHOUSE GAS EMISSION REDUCTION STRATEGY REPORT, Jan. 1998, at 74-75.
3. The vista for renewable energy is obscured by the rapid rise of gas-fired generation which has dominated the power market in the 1990s. By decade's

end, over 13,000 MW of new gas-fired merchant power plants had been proposed to supply California's restructured electricity market, with less than 20 MW of this proposed new capacity renewable. See Lyn Corum, *Merchant Power Plant Development Explodes*, WORLD COGENERATION, March/April 1999, at 19–22.

4. The most difficult infrastructure requirement for renewable projects is connecting with the grid. For example, the Foote Creek Ridge Wind Energy Project in southwestern Wyoming required a 29-mile-long power line at a cost of about \$4 million.

5. See PAUL GIPE, WIND POWER COMES OF AGE (John Wiley & Sons, 1995), at 258.

6. The distinction between elected officials and civil servants overseeing a permit review is subtle but measurable. Politics are never entirely absent when bureaucrats oversee a power plant siting; they are just kept at relative arm's length.

7. Personal communication, John Grat-tan, Esq., Feb. 26, 1999.

8. A NEPA review is more than another layer of governmental review; it is as cumbersome as any environmental review at any level of government. "One weakness of NEPA is that it doesn't specify any actual environmental standards that must be met . . . But the Act's greatest strength, at least in the eyes of environmentalists, is that it formalizes a procedure for challenging land use projects." See Patrick G. Marshall, *Not in My Backyard*, EDITORIAL RES. REP., June 9, 1989, at 309.

9. The U.S. Fish & Wildlife Service is usually responsible for enforcing the ESA. Fish and Wildlife's influence flows from the Endangered Species Act's Section 7 requirement that lead agencies "confer" with the Service. The Service drafts an official "Biological Opinion" (BO) on a project's wildlife impacts which sets the agenda for ESA compliance.

10. Personal communication, David McClain of McClain & Associates, a consultant with extensive permitting experience, Feb. 18, 1999.

11. See Mike McCoy, *Sting Ends in Extortion Charges*, SANTA ROSA PRESS DEMOCRAT, Feb. 5, 1991.

12. "A generation ago," Frank Popper of Rutgers University explains, "the burden of proof—whether judicial, legislative or political—fell mainly on the opponents of the [development project] . . . Today, the burden of proof falls increasingly on the proponents of the locally unwanted land use . . ." See Editorial Research Reports, *supra* note 8, at 307.

13. See ROBERT THAYER, GRAY WORLD, GREEN HEART (John Wiley & Sons, 1995), at 73.

14. Personal communication, Paul Gipe, March 15, 1999.

15. Personal communication, David Allen, March 31, 1999.

16. *Supra* note 8, at 307.

17. See Cliff Gorff and Larry Haler, *Studies Blow Away Wind Power*, TRI-CITY HERALD, Feb. 27, 1993; and Larry Lange, *Wind Stirs New Energy Questions*, SEATTLE POST-INTELLIGENCER, Oct. 23, 1992.

18. See Ben Tansey, *Anadarko Says Portland General Geothermal Deal is Dead*, CLEARING UP, April 8, 1996, at 8–9.

19. The plant planned to burn 200,000 tons of agricultural residues and urban wood waste in a fluidized bed boiler generating 28 MW of electricity for sale to Pacific Gas & Electric (PG&E). See THERMOELECTRON ENERGY SYSTEMS, WOODLAND BIOMASS ENERGY PLANT: A SPECIAL REPORT, Spring 1988.

20. See Arthur O'Donnell, *Bottom Lines: NIMBY: A Reporter's Perspective*, CALIFORNIA ENERGY MARKETS, Aug. 21, 1992, at 7–8.

21. Project sponsors realize that an underlying challenge affecting all facility siting is that ". . . the benefits of many 'public goods' (e.g., electricity) are widely distributed, while the environmental costs (e.g., exhaust from fossil fuel power plants) may be felt only in the local downwind area surrounding the plant." In short, negative impacts are local while the project's intrinsic benefits are regional or even national. *Supra* note 13, at 74.

22. See Carrie Peyton, *Sutter Power Plant Will Blaze Trail in State*, SACRAMENTO BEE, April 5, 1999.

23. See INDEPENDENT POWER, Nov. 1988, at 38.

24. See Randy Foster, *Bosco Lends His Support to Biomass Plant*, UKIAH DAILY J., Dec. 1, 1988.

25. See Seth Zuckerman, *Winds of Change*, Image Magazine, SAN FRANCISCO EXAMINER, Sept. 20, 1987, at 28.

26. See SUSAN ORLOFF AND ANNE FLANNERY, WIND TURBINE EFFECTS ON AVIAN ACTIVITY, HABITAT USE, AND MORTALITY IN ALTAMONT PASS AND SOLANO COUNTY WIND RESOURCE AREAS, California Energy Commission, March 1992.

27. There is now approximately 2,000 MW of wind power outside Altamont Pass and no similar episode of avian mortality on the scale of the Altamont has occurred.

28. See Peter Asmus, *Hot Air, Hot Tempers*, AMICUS J., fall 1994, at 34.

29. See Suzanne Hacker, *Is the Answer Blowing in the Wind?*, HOUSE BEAUTIFUL, Sept. 1992, at 62.

30. Personal communication, Barrett Stambler, Sept. 14, 1998.

31. *Supra* note 3, at 19–22.

32. Electronic communication, Renewable Northwest Project, March 31, 1999.

33. Other groups with a similar agenda include: Center for Energy Efficiency & Renewable Technology, Land and Water Fund of the Rockies, Izzak Walton League, Public Citizen Texas.

34. See Peter Calthorpe, *The Post-Suburban Metropolis*, WHOLE EARTH REV., spring 1987, at 44.

35. *Supra* note 28, at 34.

36. See Liz Lockett, *Just Say No*, CALIFORNIA FARMER, May 6, 1989, at 14–16, 24.

37. See Penelope Lemov, *An Ace of a Way to Create a Quorum*, GOVERNING, July 1988, at 10.

38. *Supra* note 5, at 446–450.

39. *Id.*

40. See Sandy Wohlgemuth, *Conservation Conversation*, WESTERN Tanager, Los Angeles Chapter of National Audubon Society, Oct. 1989, at 1.

41. *Supra* note 40, at 1.