Mandating Negotiations to Solve the NIMBY Problem: A Creative Regulatory Response

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The NIMBY ("not in my backyard") syndrome has long frustrated the efforts of policy makers, land use planners, and developers to site locally undesirable but socially beneficial facilities. This paper discusses and evaluates an innovative generation of regulations that employ negotiation strategies to resolve NIMBY problems.

NIMBY conflicts arise from projects that typically generate widely dispersed benefits while imposing concentrated costs, such as homeless shelters, prisons, airports, sports stadiums, and waste disposal sites. Despite the social desirability of such projects, they often provoke intense local resistance that harnesses the political process to block construction of the proposed facility.

Since the mid-1970s, NIMBY opposition has been particularly fierce in confronting efforts to site waste disposal facilities. Organized and persistent public opposition has scored consistent victories over attempts to construct facilities that are essential to

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1. This paper assumes a NIMBY project has two attributes. First, the project will generate an overall increase to social surplus, i.e. there is a net social gain. And second, the project yields concentrated costs (usually on a particular neighborhood) and diffuse benefits (generally to the region at large), and residents who live close to the proposed project will always be better off if it is located elsewhere. The essence of NIMBY problems, therefore, is an inequality in distribution, and the nature of the costs and benefits associated with these facilities virtually assures the existence of local opposition. In theory, however, there are potential transfer payments that could make everyone better off. In other words, NIMBY projects are potentially Pareto improving.

2. See Michael O'Hare et al., Facility Siting and Public Opposition (1983); see also Lawrence Susskind & Jeffrey Cruikshank, Breaking the Impasse: Consensual Approaches to Resolving Public Disputes (1987).
an industrialized society. Noteworthy illustrations include enduring opposition to develop new landfills to meet the demands of expanding urbanization, an alarming inability to build electric power plants that is partially responsible for recent electricity crises in western states, and the Department of Energy's persistent difficulties in locating a permanent site for high-level radioactive waste. For solid and hazardous waste facilities, the siting problem has become so acute that one policy maker has suggested that the "NIMBY" syndrome is perhaps better characterized as "BANANA" — "build absolutely nothing anywhere near anything."4

The persistence of NIMBY disputes represents a failure of the political process. NIMBY fights are too bitter and divisive for public institutions to deliberate and devise careful legislative and regulatory solutions. Political leaders thus tend to defend the targeted neighborhoods instead of implementing responsible land use policy. To counter this NIMBY impasse, some states have enacted innovative regulations to help site waste facilities using procedures that bypass the standard political fight. Moving away from traditional siting strategies that relied chiefly on aggressive and combative tactics, these regulations use negotiation strategies to resolve NIMBY problems. Site developers and local community leaders are required to bargain directly with each other. They enter into a structured negotiation process designed to induce agreements that will site regionally needed facilities while addressing local concerns.

This paper seeks to understand NIMBY disputes as a contracting problem where developers and communities struggle to reach an agreement to site a waste facility. It explores the underlying challenges that have motivated policy makers to institute mandated negotiations and examines the early results of their im-


5. See id. at 222. ("Traditionally, developers sited their plants using what may be termed the 'DAD' paradigm: decide, announce, defend. Developers decided the best location for their facility, took out options on the land, announced to the political leaders of the community their intention to site, and then defended their decision from attacks by local opposition groups.").
plementation. This approach begins with a simple model and then introduces complexities: the first section characterizes the contracting problem as a simple transaction, and the second identifies the specific contracting difficulties that explain why NIMBY disputes emerge instead of easy agreements. Regulations that mandate negotiations, discussed in the third section, can then be understood as responses to these particular contracting difficulties, and the final section reviews two case studies to evaluate the preliminary impact of these regulations.

The central objective of this paper is to understand how NIMBY problems emerge and understand the logic that motivates this new generation of siting regulations. Understanding the problem, however, does not necessarily translate into a simple regulatory solution. While this analysis speaks to the efficacy of relying on negotiations as a vehicle to resolve NIMBY disputes, it also addresses the effectiveness and limitations of employing regulatory solutions.

**NIMBY AS A CONTRACTING PROBLEM**

Underlying a NIMBY dispute over siting a waste facility is a contracting problem between a developer and a host community. A developer proposes to build a facility that will benefit a broad population, but local residents who will disproportionately bear the costs of maintaining that facility object to the proposal. The objective then becomes for the developer and the community to devise an agreement that can channel benefits generated by the facility into the adversely affected neighborhood. If the facility proposal is wise and represents an overall social gain, then, theoretically, there should be sufficient benefits to make the neighborhood better off with the completed facility.

The contracting challenge is for the developer and the local residents to negotiate the terms and conditions that will reliably secure these transfer payments and other benefits so all parties will support the facility proposal. Such siting agreements will likely include both direct benefits to the host community as well as commitments made by the developer to address specific neigh-

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6. For simplicity, the remainder of this paper will focus on difficulties in siting waste facilities. The problems and conclusions discussed, however, can be generalized to other NIMBY conflicts over proposed land uses.
7. A simple economic characterization of this problem is to allocate the gains from the facility so that everyone is made better off. In other words, the objective is to translate a social gain into a Pareto improvement.
borhood concerns.\textsuperscript{8} In a world of efficient bargaining and zero transaction costs, a developer and the disaffected neighborhood will bargain directly and easily reach an agreement. Such a hypothetical world would have both parties communicate effectively, make and keep credible promises and efficiently transfer benefits.\textsuperscript{9} A host community would be perfectly compensated for all costs that a facility would impose.

Of course, such perfectly efficient negotiations are not a part of our human world (if such bargaining were possible, then there would not be any NIMBY problems). In order to understand why developers and host communities do not easily reach mutually beneficial agreements, one must understand specifically how the world of NIMBY problems differs from the hypothetical world of efficient bargaining.

\textbf{DIFFICULTIES IN NEGOTIATING ENVIRONMENTAL AGREEMENT}

In the hypothetical world of efficient bargaining, all parties negotiate seamlessly, enjoy full information and credibly commit to enforceable promises. In the real world, however, a variety of burdensome contracting complexities confront developers and prospective site communities in their effort to reach an agreement. These complexities impose significant transaction costs that preclude efficient bargaining.

One problem is that while constructive negotiations require stable participation from its participants, multi-party negotiations are difficult to organize. A developer may be eager to offer generous concessions in order to win the support of local residents, but it is often unclear who represents the community in negotiations. Neighborhood residents have diverse interests, and a de-

\textsuperscript{8} Negotiations between facility developers and host communities can cover a broad collection of topics. Among the mitigating activities that are often included in siting agreements are the creation of a buffer zone around the facility, providing necessary infrastructure, such as a transportation network or a sewer system, providing emergency response capabilities, and agreements to use cleaner technologies. Compensation payments may be direct cash payments to the community, financial assistance in the construction of various community projects, the provision of parks, and promises of jobs and job training.

\textsuperscript{9} This is the paradigmatic Coase problem. Ronald Coase models a hypothetical world of efficient bargaining where, for example, a surgeon that operates on the floor above a carpenter will negotiate an agreement that would pay the carpenter not to use heavy machinery that shakes the surgeon's operating table. Similarly, a developer can perfectly compensate a neighborhood for all of the losses that a facility would inflict. \textit{See} Ronald H. Coase, \textit{The Problem of Social Cost}, 3 J.L. & Econ 1 (1960).
velopers who respond to one set of community concerns may not meet the demands of other neighbors. This is particularly troublesome since every individual resident arguably has standing to file a lawsuit to block the facility's construction. Consequently, negotiations will not progress unless a community can organize itself to deliver a comprehensive set of demands to a developer, and in return, the developer is assured that additional parties will not invade the negotiations with additional demands.

Even if the parties are efficiently organized for negotiations, they often find great difficulties in communicating effectively with each other. One cause of poor communication is the lack of credible mechanisms to share information about the needs for and impacts of facilities. Since the nature of information concerning public facilities is often complex and uncertain, a facility's environmental and economic impacts are uncertain and generate disagreement. While developers produce their own privately funded studies, local residents who oppose the project turn to independent sources. The scientific complexity of such studies make them difficult to compare, so both parties tend to rely exclusively on their own study rather than reconcile the contrasting projections. Additionally, despite their best efforts, many developers fail to understand local residents' misgivings. Local concerns can be difficult to articulate, so local opposition instead voices its outrage through protests and sound bytes that do not effectively articulate specific neighborhood concerns. Consequently, parties find it difficult both to discuss scientific information and to explain how a developer can meet their concerns.

A final problem is the lack of effective mechanisms to distribute the benefits from such facilities. Recall that the typical NIMBY project creates a net social gain so redistribution to create a Pareto improvement should be possible. As was discussed above, a variety of compensation mechanisms can bring benefits to local residents and compensate them fairly, but few mechanisms can effectively ensure that benefits will be distributed satisfactorily. For example, a siting agreement may grant a community certain tax abatements, but such tax relief is usually scheduled for years after construction of the facility. Community leaders and developers often lack assurances that the other party will continue to cooperate, causing credibility and trust to be central forces in creating NIMBY problems.
THE STATE REGULATIONS

Some state policymakers have designed siting regulations specifically to address these contracting difficulties. Just as the parties assume the challenge of constructing a mutually beneficial agreement, these state regulations assume the responsibility of coordinating and facilitating those negotiations. Accordingly, the regulations are designed to structure negotiations and induce both parties to reach an agreement.10

Three important elements comprise the siting regulations. First, prospective host communities are required to construct a Local Assessment Committee, usually comprised of local officials ex officio who are authorized to bargain on behalf of the residents.11 This both allows local residents to organize their demands constructively and presents the developer with a stable negotiating partner.

Second, a variety of mechanisms facilitate communication. A structured negotiation schedule forces parties to meet and exchange proposals and concerns. Also, state regulators first require the developer to submit a series of Environmental Impact Statements and Statements of Need that articulate the facility’s projected environmental and economic effects on the region. These studies are also submitted to the local committee and, if necessary, are explained by state officials. The initial reports are supplemented by independent studies by state agencies, including agencies that are removed from administering the siting negotiations. This series of regulations are designed to mitigate problems created by the technical nature of the negotiated issues. State agencies lend independence to the feasibility analysis and developers are required to disclose its studies to the concerned communities.

Third, and perhaps most significant, state agencies monitor negotiations between the local committee and the developer to en-

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11. These community representatives are legally empowered to make commitments on behalf of the locality. In addition, provided the facility meets all other relevant state regulations, the developer is assured of state approval when she reaches an agreement with the local committee.
sure that both sides bargain in good faith. If negotiations do not progress according to a structured schedule, then the monitoring agency instructs both sides to commit to binding arbitration. The state agency can also monitor the implementation of a siting agreement after a facility's construction has begun. These features bind the parties to the regulated process, induce them to pursue a negotiated resolution and ensure that they will be accountable to their contractual duties.

Together, these regulations are intended to counteract prevalent contracting difficulties and to structure constructive negotiations between developers and communities. However, while these policies reflect a strong understanding of the underlying causes of intractable NIMBY disputes, resolutions to those NIMBY disputes may not lie in regulatory responses. The efficacy of regulatory interventions into market contracting is necessarily limited, and an empirical test is required to understand how effective mandated negotiations are in resolving NIMBY disputes.

PRELIMINARY EMPIRICAL ASSESSMENT OF MANDATED NEGOTIATIONS – A CASE STUDY APPROACH

Two states, Massachusetts and Wisconsin, have made a particularly concerted effort to incorporate the strategy of mandated negotiations into regulatory law. A case-study examination of siting waste facilities under these regulations, though not as systematically conclusive as a large sample empirical analysis, can reveal some of the strengths and shortcomings of the policy.

Dane County, Wisconsin 1992

The Madison, WI metropolitan area, like many other growing urban regions, was experiencing an acute waste disposal crisis, and the Wisconsin Department of Natural Resources ("DNR") forecasted that municipalities in Dane and surrounding counties would need new landfill space soon. In response to anticipated rising demand, Browning-Ferris Industries ("BFI") proposed to expand its Madison-Prairie landfill from 22 to 44 acres and to

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accept municipal waste in addition to the industrial waste it then received.

Opposition immediately emerged. Local residents feared traffic congestion, odor, and damage to local enterprise. Further worries came from the nearby Dane County Regional Airport, which feared that the landfill would attract additional birds and bring danger to planes using their runways. The most vocal opponent was American Family Insurance, whose corporate headquarters were merely 4,700 feet from the planned expansion. American Family brought a suit against BFI and organized protests at the Wisconsin State Capitol.14

The DNR conducted a thorough environmental impact statement and declared the proposed expansion to be safe,15 yet this did little to allay opponents' fears. Citizens first argued that the DNR's report was incomplete since it did not consider the "economic and social impact the larger landfill would have on the nearby community."16 In addition, American Family disputed the results of the DNR study, arguing that it overlooked the severity of contamination that an expansion of the nearby landfill would cause. BFI countered that new technologies in lining landfills would preclude seepage and consequent contamination of local groundwater.17 As opposition grew throughout the spring, the DNR eventually bowed to public pressure and released a second study in June 1992 admitting that the landfill may impose some environmental and economic costs that warrant concern.

Six months into the dispute, the opposing parties had made little progress. Multiple parties opposed the landfill expansion and mounted individual challenges to block its approval, making it difficult for BFI to coordinate bargaining and enter into productive negotiations. Furthermore, environmental impact statements, designed to facilitate information between BFI and local residents, did little to clarify the landfill's effects or produce reliable information. The siting process was in gridlock, and the parties were not communicating efficiently.

With their plans stalled, BFI invoked Wisconsin’s new regulations for siting waste facilities. This initiated a series of procedures. First, the landfill siting process mandated the establishment of a “local committee” of affected municipalities to represent interested parties. This committee became the authorized representative for local interests and was the exclusive negotiating partner with the developer. Thus, regulations mandating a local committee precluded opportunities to shirk from negotiations and forced parties to communicate with each other. Second, public regulators from the Municipal Waste Siting Board administered the negotiations between parties and required them to bargain in good faith. If these regulators had determined that one party was not cooperating effectively, they could have imposed binding arbitration or other consequences that the parties may not have found desirable.\textsuperscript{18} To facilitate BFI’s negotiations with the local committee, the Municipal Waste Siting Board scheduled public hearings that resembled a court trial where parties were subjected to scrutiny by each other and by state environmental officials. The hearing, scheduled for the mid-fall to last several weeks, provided an impetus to all parties involved to enter into rigorous negotiations to reach a settlement.\textsuperscript{19}

In mid-October, both BFI and American Family made substantial concessions and pushed negotiations toward fruitful results.\textsuperscript{20} On February 4, 1993, a creative agreement was finalized. BFI would expand the landfill but only to receive additional industrial waste, thereby not accepting municipal waste that would attract birds that may endanger the local airport. BFI also pledged to limit the landfill’s height, limit the number of daily truck trips, and plant trees and implement other landscaping to minimize the visual and aesthetic impact of the site. BFI would further establish a “neighbor to neighbor” group consisting of members from BFI, American Family, and other neighborhood parties to discuss any additional concerns of nearby residents.\textsuperscript{21} Thus, the agreement developed specific mechanisms to address neighborhood concerns and credibly monitor future activity while still alleviating the region’s need for solid waste disposal.

\textsuperscript{18} See Wisconsin Department of Natural Resources, \textit{supra} note 12.
In sum, while numerous elements of the siting transaction may have potentially blocked a final agreement, the siting regulations organized local residents into a coherent negotiating partner and required parties to enter face-to-face negotiations. The regulatory process made clear to all parties that their alternative to negotiations was binding arbitration, and it facilitated a concrete schedule where bargaining could proceed to a final resolution. In this instance, the siting regulations initiated and supported an effective negotiated resolution.

Braintree, Massachusetts 1990

In 1980, Massachusetts passed regulations that instituted a siting process similar to Wisconsin’s, implementing regulations that mandated negotiations and facilitated settlements between developers and local committees. The Massachusetts law, however, extended to siting hazardous waste facilities in addition to siting landfills which perhaps explains its poor record. In the first twelve years after the law was enacted, five proposals for hazardous waste facilities were offered yet none began construction.

Examining the case study of the Clean Harbors proposal can illuminate how the negotiation-mandated siting process failed in Massachusetts.22 In May 1987, Clean Harbors filed its notice of intent to expand its existing hazardous waste transfer station and build an incinerator in a highly industrialized section of Braintree, near Boston. The incinerator would destroy some waste on-site rather than transport it to other facilities as far away as Alabama and Arizona, thus saving significant hauling and disposal costs. In October 1987, in accordance with the siting procedures, the proposal was deemed “feasible and deserving” by the state regulators, and a local committee was formed by nearby municipalities to enter into siting negotiations.

The process continued as planned though the following year, with Clean Harbors completing its initial environmental surveys and satisfying its regulatory obligations. But in September 1989, the local committee decided to withdraw altogether from negotiations with Clean Harbors. So, while Clean Harbors continued to receive approval from the state’s environmental regulators and advanced through the regulatory process, the local committee refused to participate in negotiations and instead remained

22. The Clean Harbors case study is adopted from O’Hare & Sanderson, supra note 10.
organized to fight the project in the political arena. Gradually, the state politicians responded to local residents’ protests. First, the secretary of environmental affairs required Clean Harbors to submit a supplemental environmental impact statement (likely to serve only as a delay tactic and not as a device to facilitate information exchange) and later to request permission from additional state agencies. Meanwhile, as the review process slowed during the spring and summer of 1990, local residents solicited Massachusetts’ gubernatorial candidates to oppose the plan (all five did so by September 1990). Later that month, additional dissent came from state agencies, and the state’s Site Safety Council, which twice before approved the proposed facility, ruled that the project was no longer “feasible and deserving” of state support. Clean Harbors then saw it was losing the political battle and decided not to appeal the decision, ending its effort to expand its facility without ever meeting to negotiate with the local committee.

Comparing Success and Failure

Examining Wisconsin’s success and Massachusetts’ failure is illustrative. Wisconsin’s experience depicts how mandated negotiations and other regulatory supports can turn a potential impasse into constructive negotiations. The forced negotiation process provided incentives for the parties to bargain directly with each other, and it was administered so residents and developers could constructively share information and articulate concerns.

Perhaps more can be learned from Massachusetts’ failure. Why did the negotiation-based process fail to help site the Braintree hazardous waste incinerator? According to Michael O’Hare and Debra Sanderson, the project failed “because many of the site’s neighbors did not believe it could lead to an outcome acceptable to them; partly because the state’s political leadership gave neighbors, and the developer, no reason to believe it would protect the siting process or the case for hazardous waste facilities itself from localized attack; and partly because the neighbors simply could not understand the health issues and were at best ill-served by the state agencies concerned with them.”

This evaluation provides two explanations for the project’s failure. First, the process did not ensure a credible commitment to the residents that an agreement would be in their interest. While

23. Id. at 369-70.
the regulations required them to organize into a neighborhood committee, "community representatives . . . fought constantly not only to stop the project, but to derail the siting process itself." This distinguishes Braintree's local response from BFI's opposition in Madison, where despite strong initial opposition, the siting process convinced residents that the process could yield a beneficial result.

Second, the regulations designed to facilitate information exchange were ineffective in countering the uncertainty and fears that the information engendered. Different scientific evaluations produced conflicting projections, and negotiations were unable to rest upon secure criteria. This problem also was much more easily overcome in Madison where the dispute was over the expansion of an existing landfill. Braintree's hazardous waste incinerator introduced more scientific complexity along with less certain environmental and economic impacts, and the proposed incinerator introduced an activity that would have been new to the community. These differences make the Braintree project much more difficult to administer through regulated negotiations and, perhaps, they reveal a limitation of this policy to respond to the NIMBY problem as well.

Therefore, the stories identify two central factors that separate Madison's success from Braintree's failure. First, differences in the credibility of ex-post benefits lent confidence to Madison's negotiations while undercutting Braintree's process; and, second, differences in the degree of uncertainty over disputed scientific projections allowed Madison's negotiating parties to converge on a set of issues while preventing Braintree's parties from communicating constructively. These are differences in degree, not differences in kind, and they point to the regulations' limited capacity to handle NIMBY conflicts. While these policies can effectively guide the siting process for projects that involve moderate contracting difficulties, such as landfills, they may be insufficient for facilities that invoke greater complexities and transaction costs.

These conclusions can also evaluate the accuracy of some theoretical approaches that model land use disputes. Orthodox economic theory, for example, tends to overlook the severity of contracting difficulties and trusts unencumbered bargaining to arrive at optimal outcomes. Adherents of this approach strongly

24. Id. at 369.
recommend mandated negotiations, but they do not think regulatory supports are necessary to facilitate the siting process nor do they distinguish projects with moderate contracting difficulties from those with significant complexities. Alternatively, the case studies yield conclusions that are far more consistent with the theory of transaction cost economics. This economic school hypothesizes that when contracting difficulties become more intractable, increasingly forceful (or "hierarchical") institutions are required to facilitate contractual exchange. Transaction cost economics would predict both that regulatory institutions would be necessary to support complex bargaining and that an increase in contracting difficulties requires additional regulatory support.

A third academic approach also finds some support in the results from the case studies. Recent works in negotiation theory argue that constructive bargaining is elusive, and complex negotiations over proposed land use facilities will succeed only if negotiators can establish constructive and consensual communication between developers and local leaders. Scholars from this camp, who generally have a practical orientation, predict that unstructured negotiations would rarely produce siting agreements for environmental land use projects. While there is no indication whether ill-advised negotiation strategies contributed to the downfall of the Braintree project, the case studies do emphasize the importance of carefully structuring negotiations so communities can convey their concerns and play a central role in the siting process. Consequently, negotiation theory, like transaction cost theories, is consistent with the lessons from the case studies and may offer some normative lessons for managing NIMBY conflicts.

CONCLUSION – BUILDING ON RECENT SUCCESSES

Scholars have worked hard to understand the nature of the NIMBY problem. They have focused on the sources of the NIMBY conflict, and some states have carefully devised a policy


27. See Susskind & Cruikshank, supra note 2. See also LAWRENCE SUSSKIND, DEALING WITH AN ANGRY PUBLIC (1990).
of mandating negotiations as a regulatory response. Preliminary evidence offers at least partial support for this policy, as Madison, Wisconsin would likely be in dire need for additional landfill space were it not for the state's innovative approach to resolving bitter NIMBY problems. The Braintree story, however, suggests that mandated negotiations may not be sufficient to resolve NIMBY disputes with large contracting problems.

Since NIMBY disputes arise in a variety of public land use disputes, these findings may have broader applicability. If the important distinction is the degree to which siting certain facilities introduces contracting complexities and transaction costs, then the policy of mandated negotiations should be effective for other facilities that invoke only moderate contracting difficulties. For example, mandated negotiation policies may also work for siting homeless shelters and sports stadiums, whereas they will probably be less effective for siting airports and nuclear power plants. This regulatory policy may also be more effective for siting facilities in less densely populated areas that, while still introducing NIMBY problems, present fewer contracting difficulties.

To some, the lack of a categorical policy prescription may be unsatisfying. Unfortunately for land-use policymakers, NIMBY conflicts arise from a diverse collection of policy challenges and often require a careful, tailored response. While mandating negotiations is far from a cure-all, it can serve as an effective policy for siting numerous types of facilities. This conclusion alone constitutes a useful step forward for tackling what has proven to be a persistently intractable problem. Policy makers should consider this regulatory strategy for land-use management, and they also should be aware of its limitations.