

Beyond the Rhetoric: Distributed Technologies and Political Engagement

Steven M. Hoffman
Angela High-Pippert

University of St. Thomas
Department of Political Science
St. Paul, Minnesota
USA
651-962-5723
smhoffman@stthomas.edu
ahighpippe@stthomas.edu

Abstract

The decentralization of the electricity system will rest on a variety of technological and social pillars. To date, however, thinking about the issue has been preoccupied with the technological requirements of such a system and the development of so-called distributed energy resources. This paper examines the extent to which the social reorganization potentially implied by a decentralized system of electricity production and distribution is being met. A number of case studies drawn from the United States and New Zealand are considered in order to highlight the problems with making the transition from an electricity system where public participation is largely confined to flipping a switch to one defined by sustained and more meaningful forms of citizen control. Particular attention is given to the Clean Energy Resource Team (CERTs) initiative, a Minnesota-based program that brings together farmers and other landowners, along with representatives from industry, utilities, colleges, universities and local governments in order to create a strategic vision and a renewable energy and conservation plan for each of the program's six regions.

Introduction

For the past 100 years, the electricity system has been the very symbol of all things monumental in scope and complexity. Nuclear reactors with many thousands of parts operating on the smallest of material elements; dams that redefine hydrological boundaries and natural landscapes; vast swaths of mountains literally leveled to unearth the ever-increasing stocks of coal needed to fire gigantic boilers; all these and more litter the imagination of modernity. Planning and operating such complex technology would seem to necessarily deny involvement to all but the most technically astute. Yet, if the 20th century

was defined by scale and exclusion, the 21st could be defined by decentralized systems of electricity generation capable of being overseen by decision making systems based on robust levels of citizen participation and governance.

Calling attention to the social institutions and behavioral habits that might underlie a decentralized electricity system is hardly novel. More than two decades ago, for instance, Duedney and Flavin claimed that a decentralized system of distributed technologies necessarily implied that “localities will be much more . . . dominant . . . Heat for buildings in North America will come from the rooftops, not from the Middle East . . . Energy production will thus reinforce rather than undermine local economies and local autonomy” (1983, 306-7). David Morris came to similar conclusion, arguing that the “increased cost and decreased availability of raw materials . . . the extraordinarily rapid development of new technologies . . . [and] the electronics revolution” would allow cities to become ‘self-reliant’ (1982, 220). And for individuals, Amory Lovins argued that an energy system premised upon renewable and small scale technologies would mean that “everyone can get into the act, unimpeded by centralized bureaucracies, and can compete for a market share through ingenuity and local adaptation” (1977, 50).

This paper examines the extent to which the social reorganization potentially implied by a decentralized system of electricity production and distribution is being met. A number of case studies drawn from the United States and New Zealand are considered in order to highlight the problems with making the transition from an electricity system where public participation is largely confined to flipping a switch to one defined by sustained and more meaningful forms of citizen control.

What Does Community-Based Really Mean?

The decentralization of the electricity system will rest on a variety of technological and social pillars. To date, however, thinking about the issue has been preoccupied with the technological requirements of such a system and the development of so-called distributed energy resources which, according to the California Energy Commission, are small-scale power generation technologies located close to where electricity is used (www.energy.ca.gov). Going by a number of monikers, including distributed generation, distributed resources, distributed energy resources, or dispersed power, technologies can include everything from diesel-fired backup generators at hospitals, solar photovoltaic systems on the rooftops of commercial office buildings, solar thermal systems for residential water heating, combined heat and power systems (also known as cogeneration) in industrial plants and on university campuses, and both small and large-scale wind machines.

All of these technologies fall within the larger context of what the New Zealand Parliamentary Commissioner for the Environment (PCE) refers to as *local energy systems* (2006). According to the PCE, in addition to various technologies, a local energy system may also include building design and performance standards, smart control and information

technologies, end-use efficiency and energy management programs, and more ambitious system designs including micro-grids and district heating and cooling systems. However, while technology and its design and management is no doubt essential, local energy systems must also include “programs meant to change people’s attitudes and behavior” since (PCE 2006, 25-26):

[B]y their nature, local energy systems require people to be more involved in their planning, design and operations. This is because local energy systems must be tailored to the needs and circumstances of the end-users. Also, the end-user has to be more involved in the operation of the system, even with modern control technologies . . . Research in the United Kingdom . . . has explored the attitude changes of those choosing to invest in local energy systems. In general, such people have a better understanding and appreciation of energy services. The study found that many people now strongly associated the energy source with the emotional benefits of warmth, comfort, light, entertainment, cooking, and cleanliness. The study also found that energy efficiency behaviours changes as people came to see energy efficiency as directly linked to the value of energy locally.

A study conducted by New Zealand’s National Institute of Water and Atmospheric Research regarding local energy systems in two Maori communities came to a similar conclusion. According to the PCE, “the research has shown that active community involvement (learning by doing) through helping communities to understand and control their energy option is important. The project has highlighted that the ‘human’ and ‘technological’ elements of local energy systems are co-dependent” (2006, 33).

Beyond the individual behavioral benefits, potentially great social benefits might also be realized through the development of local energy systems. According to Scott Ridley, for instance, locally-controlled systems are likely to be “publicly accountable, non-discriminatory, non-profit, subject to open meeting and ethics laws, and oriented toward advancing economic development and the public” (1998). This view is echoed by the American Public Power Association, which argues that “community ownership and democratic governance provide wide latitude to make decisions that best suit local needs and values, as well as changing market conditions” (www.appanet.org).

Technological choice is, therefore, an important but hardly dominant issue when thinking about the transformation of the electricity system. Instead, the question of how to power society is at least equally about social norms and values that may or not be rooted in questions of democratic governance, community empowerment, citizen engagement or other equally difficult issues.

The fact that local energy systems encompass appropriate technologies *and* social organizations has led to a confusing and inconsistent set of terms and claims. Thus,

community energy, or in some cases *community wind*, is used to describe initiatives that range from individuals outfitting their homes with micro turbines and solar PV or thermal systems; to small groups of local landowners investing in, or receiving lease payments from corporate owners of large wind turbines; to urban-based cooperatives supplying district-level neighborhoods with heating or cooling using local waste products. Such a wide array of initiatives all claiming to be authentically rooted in the idea of community gives rise to a centrally important question: is a local energy system defined primarily by the degree of community participation and/or by the manner in which the system is governed; by the technology employed in such a system; or by the end user and their relationship to the technology?¹ In other words, just what is meant by community when referring to community energy?

From Public Power to Community Energy

To the extent that citizen participation and/or governance exists in today's electricity system, in the United States, at least, it most likely resides in publicly owned and operated municipal and cooperative utilities. At the present time, there are almost 2,900 non-federal such utilities in the United States; this compares to only 219 investor-owned utilities (IOU). The latter, however, dominate the electricity supply market in terms of the number of customers served.

If for no other reason than their small size, at least the opportunity exists for a greater degree of local preference to infiltrate these organizations. Indeed, according to American Public Power Association, the sector's trade association, municipal and cooperative utilities are "an expression of the American ideal of local people working together to meet local needs." Since "every citizen is an owner with a direct say in policies" public power systems can "emphasize long-term community goals, including local control over special programs (energy conservation, rate relief for certain customer classes, etc.), the electric distribution system aesthetics and design, and local control that allows matching local resources to local needs." Local communities are also said to realize enhanced economic benefits in the form of utility purchases from local establishments, including use of local financial institutions, local employment, and tax payments, payments-in-lieu-of-taxes, and/or transfers to the community's general fund (all quotes retrieved at www.appanet.org) While no doubt local in their scale and operations, critics of many municipal and cooperative utilities nonetheless

¹ That is, by the relationship between local generation and local consumption, a point made by the California Energy Commission's definition noted above and demonstrated by the Waiheke Initiative for Sustainable Energy (W.I.S.E.). Home to some 7,000 thousand people, Waiheke is a small island community a short ferry ride from Auckland, New Zealand. W.I.S.E., aims "to establish Waiheke as first in line to its own renewable source of electricity" in order "to maintain Waiheke Island's sustainability for our children" (waihekewind.co.nz). Under the plan, users would be guaranteed first use of locally generated wind energy through their local distribution company; power would flow onto the grid only if local needs are fully met. While we consider this to be a very important element in characterizing community energy systems, this paper is limited to the issues of participation, governance, and scale.

point to the relative lack of citizen participation in their governance. Instead, these utilities are said to behave as would any private enterprise, interested mainly in providing a service and minimizing public input into their decision making processes.

If municipal and cooperative utilities are sometimes hard to penetrate for the average citizen, so-called *green pricing* programs have been quite successful in involving large numbers of individual customers in at least some minimal fashion. Under these programs, customers can support a greater level of utility company investment in renewable energy technologies by paying a premium on their electric bills to cover the incremental cost of the additional renewable energy. To date, more than 600 utilities, including investor-owned, municipal utilities, and cooperatives, offer a green pricing option. Energy sources are varied, ranging from large wind to landfill gas, biomass, hydro, and solar. According to the U.S. Department of Energy's National Renewable Energy Laboratory's annual survey, the largest green pricing program is Xcel Energy's Windsource program, currently enrolling some 63,028 customers. The largest program in terms of sales is that run by Austin Energy (Texas) which in 2006 sold some 580 million kWh worth of green energy (www.eere.energy.gov).

A much more robust form of localism has been introduced into the electricity system through "community aggregation," a notion first developed in Cape Cod, Massachusetts with the 1977 formation of the "Cape Light Compact," a regional compact designed to find a new power provider. Ohio residents followed up on these successes by establishing the Northeast Ohio Public Energy Council along with scores of other smaller community choice aggregation experiments (www.localpower.org). The most successful community aggregation program, however, is found in San Francisco, California, largely as a result of work done by the Cape Cod transplant Paul Fenn and his Local Power organization. After a decade of warning all who would listen about the pitfalls of California's deregulation model, Fenn persuaded the San Francisco Board of Supervisors to design and approve a bold and pragmatic vision designed to "provide cheaper, cleaner and more reliable power by implementing rapid development of renewable energy and conservation that will meet 51 percent of the city's energy needs" (www.localpower.org). Under the San Francisco plan, residents will participate in the program either by accessing funds made available through 2001 Solar Energy Bonds or by receiving power generated through local wind projects to be developed by a city-selected energy service provider. In the latter case, residents are required to *affirmatively* reject, or opt-out of, participation in the plan.

If the opt-out clause might be interpreted as form of involuntary participation, *community wind* initiatives represent a much more straightforwardly voluntary mechanism. Primarily, though not exclusively, of interest in the country's midsection, such programs are said to "to increase local energy independence and prosperity" by creating (www.windustry.org):

[S]tronger rural communities. [Since] most wind projects are built in rural areas with limited opportunities for economic advancement, community wind diversifies local economies and creates new income sources for farmers, landowners, and communities.” [They] also strengthen rural and often depressed communities in more subtle – yet important – ways by expanding local entrepreneurial ingenuity and fostering a sense of hope for the future.

Whatever hopes might exist for the future of community wind, at the present time it constitutes a small share of a small portion of the total U.S. energy supply system. Indeed, according to WINDUSTRY, a Minnesota-based advocacy organization, of the 11,603 MW of installed wind, only some 421 MW can be classified as community-owned.² WINDUSTRY’s hope of a coming explosion in such projects is based on the fact that at the present time many large-scale projects offer relatively limited financial returns to landowners, mainly because rural landowners who possess windy land lease it to large wind developers who sell the wind energy and its benefits onto the grid. At the heart of WINDUSTRY’s strategy is the transformation of lessee landowners into landowners who also own wind turbines. Thus, “the key feature of community wind is that local community members own and have a significant financial stake in the project beyond just land lease payments and tax revenue” (www.windustry.org).³

Mark Bolinger’s examination of state supported programs supports this financially-grounded notion of community wind (2004). Based on what can be referred to as a *grid-integration* model, Bolinger offers several criteria that might define a community wind project, including project size, purpose, ownership, and interconnection. He ultimately settles on community wind as being “locally owned utility-scale wind development on either side of the customer or utility side of the meter” (2004, 3). Thus, in addition to limiting the role of public participation to owners, Bolinger’s conclusion exempts from consideration the size of individual machines or the scale of the development as a whole when conceptualizing community energy.

The Rhetoric (and Failure) of Community

However one might evaluate the character of community energy initiatives, there is no doubt that advocates and developers are extremely appreciative of the idea’s rhetorical appeal. In New Zealand, for instance, wind farm officials consistently point to the local benefits to be derived from locally-sited projects, primarily emphasizing energy security. Company officials developing a project located near the wine-growing region of Hawke’s Bay argue that:

² A complete listing of projects can be obtained at <http://www.windustry.org/maps/CommunityWindJune-18-07.pdf>.

³ Such an approach has been tried with great success in Denmark and other parts of Europe (Poetter 2007).

[I]t is satisfying to know that the electricity output from the project will always go to the nearest demand centre and that will inevitably be Hawke's Bay consumers [and that] local electricity consumers in the Hawke's Bay region will benefit from having a more secure, reliable source of supply. Because the Titiokura wind farm will be located closer than other forms of existing generation to Hawke's Bay consumers, the possibility of power outages due to transmission line failures is reduced. In addition, the wind farm reduces the region's dependence on other electricity generation sources

Further up the coast at Mokairau, claims have been made that "the wind farm . . . will be capable of producing a quarter of the region's peak demand for electricity. It will also provide security of supply and some price stability for the region's consumers" (*Fact Sheet*). And in windy Wellington, the Greater Wellington Regional Council claims to be "committed to raising the energy self-sufficiency of this region . . . A wind farm development at Puketiro could provide the region with at least 26 MW of energy, enough to power about 13,000 homes" (*Elements, News and Information from GWRC*, Issue 30, July 2005).

WINDUSTRY also understands the importance of appealing to larger community interests. According to the group's affiliated Farmers' Legal Action Group, community wind projects will likely lead to a "greater acceptance of wind power [since] community wind gives local people a greater say in where and how much wind energy is developed. Further, since more local people and businesses benefit, local support for community wind projects can be greater than for wind projects by large developers. In areas with sensitive habitats and landscapes, this support can be critical" (<http://windustry.org>).

Notwithstanding these perceived benefits, the actual level of community participation, much less governance, has failed to match up to the rhetoric, a mismatch that starts with the theoretical literature. Notably absent from Bolinger's analysis, for instance, is the consideration of citizenship, governance, democratic participation, or any other notion commonly associated with the identification, development or social construction of communities. At best, community is conflated with local ownership, though local is defined to include only those projects capable of being grid-connected.

Even authors who acknowledge the role of the public in the development of distributed generation oftentimes do so in a very marginal fashion. Sawin's recent analysis of how to mainstream renewable energy is representative of this tendency (2004). Relevant to her thinking are five major categories of policy drivers: market access and obligations, financial incentives, education and information dissemination, stakeholder involvement, and industry standards, permitting and building codes. Sawin also acknowledges that public participation in policymaking, project development, and ownership increases the odds of success and that policies need to be put into place that encourage individual and/or cooperative ownership of renewable energy projects (2004, 34-44, 47). Little is said, however, regarding the extent of public participation, the various forms it make take, the difficulties of educating a passive public, or any of the myriad other issues that might serve to limit public involvement.

Results on the ground mirror this lack of attention to issues of community participation and governance. In New Zealand's case, there has been little, if any, effort to promote local energy systems (PCE 2006, 61), despite the government's recognition that they "have the potential to displace a significant proportion of the future electricity demand that would otherwise require investment in new large plants" (PCE 2006, 13). The *Wind Integration Study* recently conducted by the Energy Efficiency and Conservation Authority and the Ministry for Economic Development came to the same conclusion, finding that research needs to be conducted on what "issues might create barriers to the development of smaller wind farms in many, diverse locations, with a view towards obtaining the greatest possible geographical dispersion in the development of wind farms" (EECA/MED 2004, 7). Unfortunately, while the issue of wind integration has been extensively studied (EECA/MED 2004) and some changes in public policy have been initiated or are under consideration (Ashby 2004), many of the institutional options available for the aggressive expansion of distributed resource options have gone untapped. For example, despite the fact that line companies now have the authority to invest in generation projects, only one the country's 26 line companies, Unison, has shown an interest in investing in wind resources.⁴

A similar reluctance has been shown in developing or supporting initiatives to provide community-directed opinion on issues at any stage of the process, including the needs assessment process, in identifying technical options, or in the site assessment process (Clover 2007). Instead, community participation has been limited to formal, top-down processes such as the consent and submission process mandated by the 1991 Resource Management Act or the Long-Term Council Community Plan required under the Local Government Act of 2002 (PCE 2005).

Even in the case of legislation organized specifically around the rhetoric of community, the required level of participation is minimal. A good example of this phenomenon is Minnesota's 2005 C-BED (Community-Based Energy Development) legislation that required the various utilities to develop special tariffs that apply to wind projects that meet local ownership requirements. The principal novelty of these tariffs was that they are "front-loaded," paying a higher rate per kWh of electricity for the first ten years than for the next ten, making it easier for developers to secure bank financing by improving the cash flow on the relatively short horizon over which banks are willing to lend. Yet, as Kildegaard notes, "C-BED [was] a cautious piece of legislation, reflecting (arguably) the pro-utility balance of power in the state legislature at the time of its passage" (2007, 254). For instance, rather than stipulating a minimum tariff the law stipulated a *maximum* tariff of \$.027/kWh present value. C-BED also required nothing of the state's utilities.⁵ Instead, utilities are urged rather

⁴ See http://www.windenergy.org.nz/FAQ/proj_dom.htm#underconstruction for a listing of the wind projects built, approved, or under consideration in New Zealand.

⁵ This is in contrast to the Standard Offer Contract authorized by the Canadian province of Ontario. Announced early in 2006, the new Standard Offer Contracts allow homeowners, landowners, farmers, co-

than required to consider C-BED projects when voluntarily pursuing compliance with the renewable energy objective (Kildegaard 2007).

Not surprisingly, only modest development has actually taken place under the C-BED tariffs. Continued frustration with this fact, along with concern about how a new Renewable Energy Standard bill will impact community wind, led to a new bill in the 2007 legislature. While the legislation failed to resolve many outstanding issues, it continues the primary motivating force behind the original C-BED legislation, namely, the opportunity for local investors to make money. The legislation does provide \$1M for a study to “design and implement a rural wind energy development assistance program. The program must be designed to maximize rural economic development and stabilize rural community institutions, including hospitals and schools, by increasing the income of local residents and increasing local tax revenues” (Nelson 2007). It also provides assistance in “identifying target communities with favorable wind resources, community interest, and local political support.” There is, however, no requirement that funds be used in designing or developing mechanisms to encourage community participation much less fostering community-based governance.

There are, of course, some community energy initiatives that do quite well in broadening the scope of community participation. A number of Iowa-based community school projects, for instance, maintain a high degree of community involvement while also being linked directly to a local end-user (Galluzzo and Osterberg, 2004). In New Zealand, the Centre for Energy Research at Massey University has also been conducting research on successfully implemented local energy systems based upon community-defined desires for a number of years. These are, however, the minority of community energy projects; much more common are initiatives that severely limit public participation and/or governance. Such is the case with MinWind I & II, a Minnesota-based initiative that, while often cited as an outstanding example of successful community ownership, is also an outstanding example of the utility-scale, economics-first approach discussed by Bolinger (Gipe 2004). Thus, under the leadership of a few key local leaders and a number of long-time Minnesota activists, two partnerships have been created, each one developing two 950 kW turbines, a capacity level designed to produce maximum tax advantage. Participation is dominated by local landowners, though other owners do include two grocers and a newspaper editor; community residents not financially vested are, however, given no voice in any aspect of the project.⁶

operatives, schools, municipalities and others to install renewable energy projects up to 10 megawatts in size and to sell the power to the grid for a fixed price for 20 years (Pahl 2007).

⁶ Similar restrictions apply in the case of the Waiheke Island proposal noted in Footnote #1. In this case, the governing body would be a group of private investors and, most likely, retail subscribers. Project designers, however, argue that all investors would be local to the island and “poison pill” provisions would be adopted to prevent subsequent sale of the generator to off-island investors (Charles Haywood, personal interview, July 3, 2007).

Limiting the scope of public participation and/or governance in the development of distributed generation projects is unfortunate, given the significant impacts that unreceptive community pressures might have on the development of the technology. The well-known Cape Cod-based project, proposed for development just off the Nantucket shoreline, illustrates the dangers. While the EIS released by the U.S. Army Corps of Engineers shows that the project will produce “compelling public benefits with positive environmental and economic impacts . . . for those who oppose that development and others because they don’t like the viewshed changes, no report showing protection of habitat and wildlife will ever meet their standards” (*E-Cubed*). According to Penn Future, such opposition derives from a number of factors, including the use of inadequate, poorly presented and/or incomplete information, the failure to recognize local costs, and the failure to counter the NIMBY argument (*E-Cubed*; see Poetter 2007 for a description of oppositional forces emerging to projects in upstate New York).

Such resistance is hardly limited to the United States. The Ashhurst resident who described the Te Apiti project “as a living hell” and who warned that Wellington’s West Wind will result in blades going “over people’s fences” is indicative of the increasingly stiff local resistance to new wind projects, occasioned in part, by the feeling that wind projects are imposed from above and are based on faulty and suspicious data (*Capital Times*, 7-13 September 2005). Thus, former New Zealand All Black hooker Anton Oliver, supported by prominent Kiwi artist Grahame Sydney, in testimony against a proposed 176-turbine wind farm in the central Otago region of the South Island, recently “urged New Zealanders to be careful not to repeat the mistakes of uncontrolled development that had scarred much of Europe” (*New Zealand Herald*, Wednesday, June 13, 2007, A4). Whether or not mother England, or any other part of Europe, has been scarred by wind towers is debatable; what is not open to question is the increasingly vocal opposition to further wind development that is now visible throughout the continent (Seeyle 2003). While some suggest that opposition is occurring largely because of the change from smaller, and, to a great extent community-owned, projects to larger corporate owned systems that reinforce the bias against broader forms of community participation, there is nonetheless increasing concern that public opposition is seriously jeopardizing further development of the resource (Poetter 2007).

Despite the hazards of treating the public as incapable of meaningful participation, many proponents of a more decentralized electricity system seem set on continuing the social, if not technological, traditions of the 20th century. Thus, the current literature, as well as most of the work being undertaken by the policy and advocacy community, is largely centered around a grid-connection model that emphasizes distinctly technocratic issues, i.e., the problem of interconnection, the need to produce larger machines that can be more easily integrated into the grid, the development of financial mechanisms that assure profitability to a relatively restricted set of owners, and so on. Generally ignored are the social issues of

community participation and/or governance or establishing clear linkages between local generation and local consumption. It is, in other words, an electricity model that maintains the essentials of a grid-based system of electricity generation and consumption while largely ignoring the societal implications, and possibilities, of the technology.

Citizenship and Local Energy Systems

The question, then, is whether community energy will ever be more than a rhetorical device designed to generate public support for big wind or other technologies. Before answering this question, however, a prior question must be addressed: just what constitutes an engaged and active citizen and how might such a person might behave in the real world? And is it even reasonable to expect people to be active citizens?

Barber's notion of *strong democracy*, which he defines as "politics in the participatory mode where conflict is resolved . . . through a participatory process of ongoing, proximate self-legislation and the creation of a political community capable of transforming dependent, private individuals into free citizens and partial and private interests into public goods" (1984, 132), is one widely admired recipe for effective citizen participation. According to Barber, the attributes of the political condition, i.e., action, publicness, necessity, choice, and reasonableness, necessitates a movement away from the traditional forms of representative or indirect public participation. This does not mean "politics as a way of life, as an all-consuming job, game and avocation. But it does mean politics (citizenship) as a way of living: a fact of one's life, an expected element of it; a prominent and natural role in the same manner as that of parent or worker" (Prugh, Costanza, and Daly 2000, 112). Most importantly, Barber presumes the practical possibility of a system of public participation defined by an on-going process of *political talk*, where the necessary tasks of communicating interests and bargaining, agenda setting, affiliation, witness and self-expression can occur. Barber is hopeful that a set of interlocking institutions of "civic participation and self-government," ranging from neighborhood assemblies and "a civic communications cooperative" to national requirements for public service, will achieve the goal of strong democracy (1984).

Barber's notion raises a number of important considerations as to how and under what conditions strong democracy can be made to work, including the types of institutions, organizations and/or processes that might effectively engage people in the difficult work of democratic governance. At a minimum, strong democratic governance would seem to require sustained attention to issues and the creation of a sense of community that transcends identity based upon a narrow reading of self-interest. While the manifest function of participation in such group-based endeavors may be to complete a set of tasks or projects, these activities also build social ties among individuals whose backgrounds or experiences may be quite different. As Merton says, this type of participation helps provide the "latent function of social life" (quoted in Grant 2003, 28).

Sustained participation in a group-based endeavor also provides the opportunity for a robust form of deliberation, which Grant defines as a conscious attempt to move beyond the simply apparent to that which may lie beneath (2003, 28). Effective deliberation has a number of prerequisites, including the widest possible inclusion of potential participants, access to relevant information and expertise, a rough equality of power and skills, and/or a measure of respect and trust among participants (Grant 2003, 29). Beyond the informational and procedural benefits of effective deliberative, theorists such as Habermas put particular emphasis on its transformative quality: a conception, an understanding, a resolution of an issue may emerge from disparate elements whose connection may not have been obvious before (Habermas 1972).

The challenge is, of course, to design programs and organizations that manifest of these attributes of effective and meaningful participation. There is certainly no lack of candidates; indeed, numerous processes have been suggested for breathing new life into America's electorate. These include Lukensmeyer and Brigham's 21st Century Town Meeting; Fishkin's 'deliberative polling' process (1995); the 'citizens jury' process pioneered in Minnesota and now widely used in England and on the European continent (Hoffman 1997); Denmark's 'technology consensus conferences'; Oregon's 'watershed councils' (Prugh 2000; National Issues Forums and Conventions; Study Circles; and the National Coalition for Dialogue and Deliberation, among others.⁷ Yet, many of these ventures suffer from a variety of shortcomings, including their temporary and episodic quality, their lack of sustained, on-going deliberation, and their lack of connection to a particular place or to an on-going sense of community (Hoffman and High-Pippert 2005).

There is also the question of whether or not "average people" really want to participate in a robust form of democratic discourse (see Hoffman and High-Pippert 2005 for an extended discussion of this issue). Hibbing and Theiss-Morse, for instance, argue that American citizens are not the populists that they are often perceived to be (2002). Neither are they terribly interested in participating in politics. Although the "standard elite interpretation" of citizens' political behavior is that they would participate more if they had more opportunities to do so, or if barriers to their participation were lifted, Hibbing and Theiss-Morse's research fails to support this argument (2002, 1). They conclude instead that (2002, 1-2):

The last thing people want is to be more involved in political decision-making. They do not want to make political decisions themselves; they do not want to provide much input to those who are assigned to make those decisions; and they would rather not know all the details of the decision-making process. Most people have strong feelings on few if any of the issues

⁷ See Berry, Portney and Thomson 1993; Williamson 1997; Box 1998; and Gastel and Levine 2005. See also www.thataway.org for an impressive list of other methods for encouraging public participation in decision making processes.

the government needs to address and would much prefer to spend their time in nonpolitical pursuits.

Rather than participatory democracy, Hibbing and Theiss-Morse argue that citizens prefer what they call “stealth democracy,” described as wanting “democratic procedures to exist but not to be visible on a routine basis” (2002, 2). Citizens want to know that they will have the opportunity to participate if they should ever be motivated to do so and they want to know that the power of their elected representatives could be checked by their own political power. This last point is key, as it helps explain how it may appear *as though* citizens desire political influence and involvement. “Although the people dislike a political system built on sustained political involvement, there is something they dislike even more: a political system in which decision makers – for no reason other than the fact that they are in a position to make decisions – accrue benefits at the expense of non-decision makers” (Hibbing and Theiss-Morse 2002, 2).

The Clean Energy Resource Teams (CERTs): Strong Democracy in Action?

One program that can serve as a useful vehicle for the exploration of these issues is the Clean Energy Resource Team (CERTs) initiative, a collaborative of the Minnesota Department of Commerce, the University of Minnesota’s Regional Sustainable Development Partnerships program, Rural Minnesota Energy Task Force, the Metro County Energy Task Force, and the Minnesota Project, a nongovernmental organization that works on agricultural issues. CERTs teams have been created for six regions in the state, with each team bringing together people from various cities and counties, farmers and other landowners, industry, utilities, colleges, universities and local governments. The long-term goal of the project is to create a strategic vision and a renewable energy and conservation plan for each region, reflecting a mix of energy sources, including biomass, wind, solar, and hydrogen.

In order to assess just how well CERTs might serve as a model for the institutionalization of strong democracy, members of the various regional teams were surveyed one year into the program and then again two years later. Instruments were developed that encompassed a variety of issues, including motivations for participation, recruitment, stakeholders involved in the organization, and knowledge of participants. Fifty-nine respondents completed a one-year survey completed during attendance at a quarterly meeting, a number that nearly doubled to 117 in the online survey two years later. A series of focus groups were also conducted involving the most active of the CERTs members during the second round evaluation.⁸

⁸ The analysis of the CERTs project is based in part on James Q. Wilson’s (1973) typology of incentives provided by political organizations, and modified by Verba, Schlozman, and Brady (1995) in their Citizen Participation Project. According to Verba, Schlozman, and Brady (1995), people are motivated to engage

So who participates in CERTs? On the one hand, the age range of participants is quite varied, the youngest being 30 while the oldest is some 91 years of age. The gender profile, on the other hand, shows much less variation: in the initial group out of 59 respondents, only nine were women. This difference narrowed somewhat two years later when out of 117 respondents; in this case, 81 were male while 34 were female. The focus groups exhibited a similar gender difference, with more men than women participating in those discussions. Survey respondents were fairly evenly distributed across CERTs regions, with Southeast and West Central having the highest rates of participation (24 percent and 23 percent, respectively), followed by Central (21 percent), Southwest and Northeast (16 percent and 15 percent), and Northwest (9 percent).

The CERTs project has developed a highly devoted cadre of participants (Table 1). Most of the survey respondents have been involved in CERTs for three years (35 percent), followed by two years (28 percent), and then one year (18 percent); fewer than one in five have been involved for less than one year (19 percent).

Table 1
How Long Have You Been Involved in CERTs?
2007 Survey results

	<i>Response Percent</i>	<i>Response Total</i>
Less than one year	19%	22
One year	18%	21
Two years	27%	32
Three years	35%	41

When asked an open-ended question about why they have remained involved with CERTs, responses tended to fall in a few different, yet overlapping, categories. Many respondents report remaining involved in order to gain knowledge, noting that CERTs provides “good information that is not easily available,” as well as “access to local solutions to global issues.” Respondents also emphasized community-related factors, i.e., that they enjoy working with like-minded people, networking, making contacts, and creating friendships. These views are consistent with 2005 survey results showing that material benefits such as lower electricity prices or individual financial benefits were fairly negligible motivating factors. As one respondent wrote, “CERTs allows people to feel like they are not acting or working alone on issues, but are actually a part of a large, and more powerful, group of people.”⁹ An analysis

in political activity by a combination of selective benefits having to do with material gains, social gratification and civic gratification, as well as the desire to influence policy outcomes.

⁹ The importance of community-based motives is demonstrated by the following representative comments: “CERTs supports the good intentions of the civic-minded;” “I have grandchildren. I want them to have a

of the focus group transcripts reveals a similar pattern, with CERTs members emphasizing shared interests and collective efforts. As a member from the Southeast region stated:

I take great inspiration from the people in the group. I think from one community to the next, it's the people that feel very passionately about decentralized energy and how important it is. We're not large in number. So I think it's not surprising that we need every regional group to develop a level of expertise and experience, and the people that have that are exactly the kind of folks I need to inspire me do my work locally.

Sustained participation is a critical aspect of what Barber had in mind when talking about strong democracy. Equally important, however, is the *manner* of participation. After all, reading e-mails, perusing websites, even electronically voting on a regular basis, a favorite technique for those believing that the web can solve the problem of declining voter turnout, are all very different experiences than sitting in meetings engaged in a heated, or more likely, a mind-numbing, debate over the implications of electricity consumption statistics. In the case of CERTs, participation can range from reading postings on websites to attendance at quarterly meetings. Table 2 compares 2005 survey responses to 2007 survey responses in terms of levels of participation among CERTs participants. Not surprisingly for an online survey, electronic participation accounts for the highest level of participation in 2007 (71 percent), followed by attendance at conferences (49 percent). Importantly, however, while the *number* of people attending quarterly meeting has remained stable between 2005 and 2007, the *percentage* of total participants who participate in face-to-face meetings fell across the two time periods.¹⁰ This topic came up in most of the focus group discussions, either as participants excused their own lack of attendance at meetings or lamented that the numbers in attendance have stalled. A few participants seemed to measure the potential impact of CERTs by the quarterly meeting roster:

We have a lot of people who know what's going on with renewables and conservation and all that, but a lot of people that we aren't touching, and a lot of people that if we could get to could snowball the thing. My biggest issue right now with CERTs is how do we get to those people. I'd be happy to go to a meeting with 200 other people, that would be fun. I mean I wouldn't have a problem with that. But the most we've had is 30 or 40 in this region. So I think that that is my big issue right now, trying to figure how do

world that they can live in without excessive global warming and the resultant wars over dwindling natural resources;" "the government hasn't done anything to fix the energy problems, so it's up to the people to try to find solutions;" and "CERTs is a great example of what can happen when the 'grass roots' take action. The direction is good, the goals are admirable, and the program is relatively transparent."

¹⁰ This theme will be analyzed further in the second phase of this evaluation, as some focus group participants discussed the leveling off of attendance at CERTs meetings and the need to attract more potential members to meetings.

we get past where we are. I think there are a lot of people who are very, very interested in it, but they don't know how to access it.

When we had the original Owatonna meeting, what were there, 60, 70, 80, 90 people there?...And what do we have, a committee of 15? And that was 4 years ago, and I hope we've had some impact, so if we had 80 people 4 years ago we'd have 2 million or 2,000 or 200. Whatever, if we had a similar meeting. In some instances, we are very informed and motivated, but I'm not sure, even with the county meetings, how successful we have been getting the information back to the other 70 or 80 people that were there that don't participate. So I don't know.

Table 2
Levels of Participation Among CERTs Participants
(Question Asks: How do you participate in CERTs (mark all that apply))

	2007 <i>n</i> = 117	2005 <i>n</i> = 59
Electronic participation	71 % (83)	58 % (34)
Attend conference	49 % (57)	N/A
Attend quarterly meetings	42 % (49)	83 % (49)
Attend small group meetings	35 % (41)	54 % (32)
Other participation	16 % (19)	17 % (10)

Underlying the idea of an engaged and active citizenry are fundamental issues of knowledge, including what kinds of information do people think they need to effectively participate; what do they think they know; and what do they do with the information they gain from participating in a venture such as CERTs? Such issues are particularly important for thinking about citizen participation in technically complex areas such as electricity demand and supply. Even small-scale, individually applicable technologies such as wind and solar systems are technologically complex and creating systems capable of delivering electricity to millions of end-users under a bewildering set of conditions is, to say the least, difficult. In this respect, understanding a community-based electricity system as a training ground for the

delivery of technically-qualified citizens is a serious and likely fatal mistake. Instead, the purpose of such initiatives must be understood as nurturing well-informed citizens capable of making reasonable choices about the *nature* of the electricity system.

Table 3 considers the multiple types of information people think they need to effectively participate in CERTs. “Somewhat important” is the most common refrain when asked about various types of knowledge needed to effectively participate in CERTs, with knowledge of communications and energy technologies/options ranked as very important (both 43 percent). Knowledge of community development (39 percent) and public relations (33 percent) were also considered very important. Legal and engineering knowledge were considered not important by 38 percent and 32 percent of respondents, although it should be noted that most respondents identified such knowledge as somewhat important for effective participation in CERTs.

Table 3
Participants’ Views of Types of Information Needed to
Effectively Participate in CERTs

	<u>Very</u> <u>Important</u>	<u>Somewhat</u> <u>Important</u>	<u>Least</u> <u>Important</u>
Communications	43 % (50)	46 % (54)	11 % (13)
Energy Technologies/ Options	43 % (50)	49 % (57)	9 % (10)
Community Development	39 % (46)	48 % (56)	13 % (15)
Public Relations	33 % (38)	53 % (62)	15 % (17)
Economic	26 % (30)	58 % (67)	16 % (19)
Engineering	20 % (23)	49 % (57)	32 % (37)
Legal	7 % (8)	56 % (65)	38 % (44)

The second question is what do people think they know? Most respondents self-identified as having “some” knowledge about a wide range of issues including energy efficiency/conservation, the environmental impacts of energy use, wind technology, electric transmission and distribution, and various forms of alternative energy including biogas, hydrogen technology, and anaerobic digesters, among others. The category of accessing technical resources for an energy efficiency/renewable energy project was noteworthy in its distribution across levels of knowledge among participants, with close to one-fourth of those surveyed reporting that they know a great deal about it, about half reporting that they have some knowledge, and almost one-fourth reporting that they have very little such knowledge.

The final question regarding participation relates to the dissemination of information gained from participating in CERTs; specifically, do participants share CERTs-related information with members of their local community? This is an issue of particular relevance for the diffusion of distributed energy systems. According to Rogers “diffusion is a type of communication in which the information that is exchanged is concerned with new ideas . . . The essence of the diffusion process is the information exchange by which one individual communicates a new idea to one or several others” (1983, 16,17). While mass media are important, “interpersonal channels are more effective in persuading an individual to adopt a new idea, especially if [they] are near-peers. Thus the heart of the diffusion process is the modeling and imitation by potential adopters of their network partners who have adopted previously” (Rogers 1983, 18). In this respect, developing a cadre of well-informed, highly involved local residents fulfilling the role of early adopters and then communicating their successes back to others in the community could be a vital link in the successful diffusion of distributed technologies.

Table 4 shows both positive and negative results. While 81 percent of respondents do share such information, considering the educative role of CERTs as well as the importance that CERTs participants attach to serving their community, it seems particularly important to determine why nearly one-fifth of CERTs participants do not engage in such communication. As one focus group participant from the West Central region put it, “I feel like I said at the meeting in January, we are preaching to the choir here. I’m okay with preaching to the choir, but the choir has to go out and sing other places, to be quite honest.” This participant goes on to point out that “grass-roots” means what people are doing in their homes, and that CERTs needs to be talking more about those issues. A participant in the Southeast region’s focus group expressed a similar idea:

I mean it’s nice to have large wind turbines and large projects everywhere, but in order for us to make it in energy, it’s got to be a grass roots, everyone on their own home in their own lifestyle has to practice renewable energy, conservation, and efficiency. And that’s to me where the real challenge is, from the political standpoint.

Table 4
Reported Sharing of CERTs Information Across CERTs Regions
*(Question Asks: Do You Currently Share CERTs-related Information
With Members of Your Local Community?)*

	<u>Yes</u>	<u>No</u>
Northeast	89 % (16)	11 % (2)
Southeast	89 % (24)	11 % (3)
West Central	78 % (21)	22 % (6)
Central	76 % (19)	24 % (6)
Northwest	73 % (8)	27 % (3)
Southwest	69 % (13)	32 % (6)

Ultimately, of course, the most important question for any community-based effort is whether or not participants consider the project or organization to be a success. In this regard, CERTs does extremely well: some 88 percent of respondents (93) consider CERTs to have been a success in their region while 12 percent (13) do not. Some regional variation exists (Table 5).¹¹ Interestingly, more respondents consider CERTs to be more of a success in the state than in their region. Ninety-five percent (96) of respondents answer affirmatively when asked about the success of CERTs in Minnesota compared with only five percent (5) who replied in the negative.

¹¹ Some critical opinions were also expressed. Some of the more pointed comments included that “they are outsiders trying to help people they don’t know;” “they don’t really do enough about outreach, because people who have been involved as activists for years have never heard of the organization” and that “CERTs staff should not be concentrated in one area. Now it is concentrated to where the developers and planners have been going. They need to balance themselves in the whole process in every region.” In our view, such comments reflected the difficulty of trying to provide a consistent presence across a large geographic area with very few staff, all of whom are based in the Twin Cities.

Table 5
Reported Regional Success Rate Across CERTs Regions
(*Question Asks: In Your Opinion, Has CERTs Been a Success in Your Region?*)

	<u>Yes</u>	<u>No</u>
Northeast	94 % (16)	6 % (1)
Southeast	89 % (24)	11 % (3)
Central	82 % (17)	18 % (4)
West Central	78 % (21)	22 % (6)
Northwest	73 % (8)	27 % (3)
Southwest	69 % (13)	32 % (6)

A final and important issue that emerged during the focus group sessions centered around the issue of what might be termed “ownership”. The question here is whether CERTs is understood as authentically rooted in the community or is it yet another example of formalized citizen participation in the manner of New Zealand’s RMA-mandated submission process or even the opt-out provisions of community aggregation initiatives. The evidence here is mixed. At one end of the spectrum were focus group participants who referred to CERTs as “they” rather than “us”, i.e., “*they* are outsiders trying to help people *they* don’t know”. In other cases, team members reported receiving information “*from* CERTs” that was used often used to support other, sometimes related, community projects. While the level of participation or investment was greater in this case, in both instances CERTs was still largely something anterior to the participants rather than being an organization that was controlled or directed from within. Only in the most robust of cases did participants clearly saw themselves ‘in charge’ and directing their own work, i.e., putting on information fairs, developing future directions, considering projects that might someday be ‘in the ground’, and so on.

Several factors may explain such marked differences, including prior joint work amongst the members, the intensive work of a few particularly active team members, or more pragmatically, the great geographical distances involved in getting folks together for face-to-face meetings in certain of the regions, particularly in the western portions of the state. This

last point was a recurring theme across many of the focus groups, as the interplay of meeting attendance and geography was expressed in various terms, including gasoline prices, carbon footprints, and trees planted in order to offset travel to meetings. The connection between meeting attendance, geography, and a sense of ownership was expressed by a focus group participant from the Central region, in two separate quotes:

To me it just seems very distant, because I'm driving an hour and a half to a meeting. If there was a way to have a conference call I would love to hear about it, because I am hugely against carbon, and to get in the car and drive this far...

I'm all for meeting four times a year, or three times a year, because relationships are hugely important. You have to know 'Oh, there's Dell,' so that when you hear him on the phone you can put a name to a face. But to have every meeting, with all this driving...

It worth noting that feelings of ownership tend to develop as team members gain confidence in their abilities and knowledge as well as in the ability of the group to effectively function. In the words of a focus group participant from the Northwest region:

I feel like a participant to the program. I feel like I'm somewhat invested, but I still don't feel exactly like it's my CERTs, or my program...it's an it, it's another object...Part of the reason that one might feel that way is we all came together as strangers. We didn't know each other, so I think as CERTs matures, and it does become more my program, I see myself as an important asset to the program, even a key player. But that changes over time.

Despite such caveats, it is fair to describe CERTs as very successful in sustaining high levels of civic engagement and creating an overarching perception of success. How might this be explained? In our view, the answer revolves around the obligations of citizenship as understood by CERTs participants. While individuals carried multiple identities into the process, including being a member of an environmental organization, community leader, farmer, small business owner, elected official, government staff, utility staff, and academic, all of these identities fared poorly relative to that of citizen. Equally important, however, is the relationship between citizen and community. CERTs participants define a good citizen as one who creates positive opportunities for members of their community, in this case by bringing to the community the benefits of renewable and/or alternative energy technology through the sharing of CERTs-related information. Thus, 'the development of strong communities', 'the importance of constructing community-owned energy technology', 'enhancing opportunities for local employment', and 'creating opportunities for community participation in determining the nature of energy system' were all identified as important reasons for joining and then sustaining participation in CERTs. Conversely, explicitly

personal material benefits, such as lower electricity costs, did not register as highly motivating factors.

In effect, the CERTs initiative brings together a host of factors critical to the development of a strong democracy based upon engaged and active citizens. First, it rewards those seeking to fulfill the perceived obligations of citizenship. Second, it provides these citizens the means and ability to develop extended social ties beyond those who are deeply involved in the CERTs initiative. Finally, it allows citizens to acquire a level of expertise that permits them to speak to their neighbors with a degree of authority. Thus, the initiative both creates the foundations for strong democracy *and* enhances the prospects for community acceptance of new and innovative renewable energy technologies, the delivery of which is yet another motivating factor for many CERTs members. Given all of this, it is not surprising that three years into the initiative, the vast majority of participants consider CERTs to be a success within their region and throughout the state.

Conclusion

For those seeking a viable, real-world model of strong democracy, the CERTs initiative might be cause for celebration. All of the ingredients necessary for a revitalized civic culture would seem to be present: sustained attention to issues accompanied by a robust form of deliberation and the creation of extended social ties through information sharing with other community members, all based on the perception that such actions will ultimately lead to “success”. Yet, the number of people actually participating in CERTs is extremely small, perhaps several hundred at best and far fewer if the number of long-term, time-committed participants is counted. And while participants may feel good about what they are doing, the number of initiative-driven projects “in the ground” are few in number.

In this respect, CERTs is emblematic of the dilemma faced by those in search of models capable of delivering on the social possibilities embedded in a community energy system. On the one hand, virtually everyone claims to value democracy and a highly engaged citizenry. Yet, given the preference for ‘stealth democracy’ as well as the increasingly scarce amount of ‘civic time’ available to the most publicly-minded citizen, sustaining mass participation is extremely hard. Under such circumstances, spending large amounts of time and money on what will likely be futile efforts at mass engagement seems quixotic. Confining Barber-ian activism to a fairly narrow set of citizens with the requisite education, knowledge, time, and desire to participate in civic affairs, may, in fact, be the only realistic option for those seeking to involve the community in community energy systems.

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