



Sustainable Step
New England

A Dialogue to Air Environmental Concerns about Wind and Biomass Electric Power Generation in CT and New England

Including the potential for the environmental community to help
expand Connecticut's clean energy options

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I. Overview of The Dialogue Project

John Anderson of the Clean Energy Fund (CEF) describes his charge as “getting gigawatts of renewables into the grid’s mix.” Yet in the last 10-15 years, some Connecticut environmental non-profits (among others) have played significant roles in impeding and blocking the siting of wind and biomass energy generation facilities in Connecticut and throughout New England.ⁱ Given that such groups typically say they favor renewable power generation over fossil and nuclear facilities, in June of 2000 CEF asked Sustainable Step New England to rapidly convene and facilitate a series of meetings with a broad spectrum of Connecticut’s environmental non-profits.ⁱⁱ **The goals were to:**

- 1) understand their key perceptions and concerns regarding the siting of wind and biomass generation facilities
- 2) update participants’ knowledge of advanced wind and biomass power technologies,
- 3) get the relationship between these groups and CEF started on a positive, collaborative basis,
- 4) if possible, create interest among participants in working with CEF to develop strategies and guidelines that increase both environmentalist and public acceptance of biomass and wind energy facilities.

Three meetings were held in the Hartford area meeting rooms of Sierra Club, CT Energy Co-op and the American Lung Association. A teleconference was also held to facilitate input. **The agendasⁱⁱⁱ addressed:**

- 1) supply and demand, environmental impacts and perceived trends in electric power generation,
- 2) on-shore and offshore wind facilities and
- 3) biomass energy facilities

The meetings’ content and facilitation were designed to focus participants on:

- 1) using strategic questioning to uncover the deeper issues
- 2) exploring their differences while respecting diversity of opinion, and
- 3) seeing their need to help create a cleaner energy future in the context of a whole systems approach, from taking personal responsibility for the impacts of their personal energy use to influencing public policy at highest levels.

Despite the fact the meetings were held during the summer, both attendance and the level of engagement were strong. Solid input was provided by groups as diverse as the CT Coalition for Environmental Justice, Clean Water Action and CT Forest and Park Association. [See Appendix A for a list of Participants.] Unfortunately despite repeated personal invitations, meeting time and location adjustments and other efforts, several key groups failed to participate in the meetings due to shortage of staffing. These included some that traditionally oppose biomass and wind projects, such as the Connecticut Citizen’s Action Group (CCAG). Some initially active participants dropped out due to the press of more urgent business. Fortunately, all these groups have indicated willingness and interest in participating in future conversations.

II. Summary results: Outreach and Education

The assessments and recommendations that follow have been collected from many participants. The Dialogue Transcripts (in Appendix B, which form the basis for this summary) have been checked for accuracy by all the participants, but are not a literal record of the participants' comments. The following does not necessarily represent the views of Sustainable Step New England or the Clean Energy Fund.

In recent decades in Connecticut, local stakeholders have typically reacted very strongly and negatively to any announcement that their town has been selected for any power plant, especially biomass plants. Local citizens and environmental groups have mobilized to do all they can to slow down and then stop these facilities. Therefore it is highly recommended CEF adopt a policy of recruiting sites rather than using the more traditional site selection processes for wind and biomass facilities. Clearly recruitment might begin in regions that have good general characteristics for the particular technologies, such as suitable transportation infrastructure for biomass. Given the political history, it is very important that early efforts be successful; the general view is that there will be few if any second chances. Therefore, it is also recommended that CEF and collaborating organizations focus on outreach and education as follows:

- ❖ Develop the image of biomass and wind as new, local, reliable, cost-effective, 'sexy,' renewable technologies. Research the potential for documentary coverage from public radio and television, in addition to paid advertising.
- ❖ Rapidly develop a long-term, coordinated public outreach and listening campaign, building on the strengths of all the stakeholders, and especially non-profits that have substantial membership in CT, strong technical expertise, and/or the capacity to build the latter. Preliminary input and research indicates that such a broad-based, sustained effort is completely unavoidable given the history of siting in the state and current public attitudes.
- ❖ Continue the high-level dialogue meetings, but with a more diversified group of parties including developers, key decision makers & others with political influence who could kill any proposed project. Also experiment with service groups such as Rotary Club, Lions Club, Civitan, Kiwanis, Junior Chambers of Commerce and other low risk audiences. Create a consensus document representing CT environmental groups and developers outlining "rules of engagement" and criteria for siting wind and biomass projects that the former would support (perhaps building off Green-e and Power ScoreCard). For any proposed project, coordinate meetings as often and early as possible with active engagement of environmental groups, developers and other stakeholders, such as that held by the Rivers Alliance on CCGT plants. Such meetings would focus on developing the best possible practical standards for siting and operations.
- ❖ Engage the (generally urban) burdened communities in meaningful dialogue to establish what is wanted there, and evaluate potential plant sitings on the basis of this input and the larger lens of environmental justice. Issues of equity need to be raised with highly placed decision-makers well before a specific proposal is on the table.
- ❖ Seek unusual partners for the campaign. These might include: insurers, economic development forces looking for growing technology areas, labor unions, the medical community (including HMO's), faith communities, businesses in Climate Wise Partnership, Business for Social Responsibility, developers

and realtors opposed to sprawl, Lawyers for Social Responsibility, Physicians for Social Responsibility, planning commissions, youth community service, engineering graduate students, etc.

- ❖ Coordinate the recommended public outreach efforts with a policy of recruiting potential sites. Build expertise in getting beyond the NIMBY syndrome. Work to get communities competing to host renewable power plants based on their strong appeal as state of the art, clean catalysts for local economic development, self-reliance, opportunities in education, eco-industrial parks, eco-tourism, etc.

III. The Viewpoints Behind and Details of these Recommendations:

The principal areas of the participants' concerns and their recommendations follow. Appendix B includes the full Dialogue transcripts, detailing all the input from participants in the environmental community. In the end, it proved impractical to separate out participant and SSNE observations and recommendations, so these have been integrated. This summary is presented according to the frequency with which an issue was mentioned, the strength of opinion and/or degree of apparent consensus.

Participants accepted that wind and biomass have significant potential in the region. Yet they feel there is little or no understanding in the larger environmental community, and less in the general public, of the links between power generation, personal and societal actions & human and environmental health. The situation is complicated further by:

- ❖ Highly charged siting battles over earlier biomass and wind siting attempts,
- ❖ Biomass's image as cutting down trees to incinerate them in dirty power plants, and wind as killing birds and destroying ridge-top eco systems and scenic views
- ❖ The environmental injustice of some existing power plant locations,
- ❖ A tendency to be attracted to the "purity" of solar power ("making the perfect the enemy of the good")
- ❖ A strong NIMBY syndrome active amongst many environmental constituencies and the general public when it comes to siting power plants in general,
- ❖ The higher transaction costs for renewables.
- ❖ The significant tax breaks for fossil fuels, and society's high tolerance for absorbing the hidden costs of fossil combustion.

The environmental community view wind and biomass as possibly being full of potential, though they are more attracted (especially emotionally) to direct solar (photovoltaic) power. Most are unaware of the current cost differentials between various renewable energy options, and the potential for power generation from non-solar alternatives in the near- to mid-term. Wind and biomass raise the prospect of having to confront the significant issues outlined above.

On the 'positive' side, there are substantial factors to build on. These include:

- ❖ rising fossil fuel prices at the current time, and the general expectation they will rise in the long-term
- ❖ increasing the state's dependence on natural gas at a time when questions about the reliability of gas supply and potential price spikes are being raised,
- ❖ the strong potential to overturn established points of view by increasing public knowledge of the new much cleaner, lower impact biomass and wind technologies
- ❖ locally declining air, water, green-space quality, increased traffic congestion, sprawl and the resulting impacts on human health and quality of life.

- Participants were intrigued with the possibilities for using sprawl as an entry point in the public's mind for addressing issues of air quality and thus wind and biomass siting issues. It was recognized this would not be easy to do in a sound-bite world.
- ❖ the Filthy Five campaign,
- ❖ high asthma rates,
- ❖ global climate change,
- ❖ deregulation,
- ❖ the CT Energy Co-op's green power marketing,
- ❖ the rising awareness of CT's and western society's general non-sustainability,
- ❖ the many societal and technical indicators that "the time is right" for renewables, given that the technological, regulatory and larger socio-economic status quo appears to be in a state of flux. In such times, relatively modest efforts at changing societal patterns can have large impacts.
- ❖ rising awareness due to frequent (if from the environmental viewpoint, shallow) media coverage of environmental issues, corporate hegemony, globalization, etc.
- ❖ CT's business community includes world leaders in industrial manufacturing well suited to wind and biomass, in fuel cells and in energy finance. CT's energy dollars for conservation and renewables are the highest in the USA, which should on paper, result in 400 megawatts of renewables by the next decade.

As a result, participants felt that by making the renewable energy portfolio standard & other policies viable in CT, and by working with the marketplace, there is a real chance to make CT a leader in creating a cleaner energy future in the US in general, while also making CT a better place to live.

However, participants felt the environmental community lacks concrete suggestions of viable renewable alternatives at the megawatt scale; environmental groups cannot say exactly what they favor, only what they oppose, i.e. the Filthy Five. As a result, there is a strong desire for information with which to make clear, compelling connections to personal and industrial actions, and to build a coordinated, consistent case for wind and biomass in particular. To do this participants feel they need financial, legal, and especially technical information and social/external cost-benefit analysis in areas such as:

- ❖ CT's fossil fuel use
- ❖ CT sprawl and related activities
- ❖ the estimated 1.5 million tons/year of biomass waste in CT currently being landfilled, piled up and spread over the landscape
- ❖ contributions to global climate disruption, and the real health and economic costs CT faces with respect to this issue it
- ❖ wind and biomass as drivers of economic development and green power marketing, as exemplified by the CT Energy Co-op.
- ❖ the basic processes, limitations and advantages of state of the art biomass gasification plants, including:
 - ranked likely sites/regions for new plants based on feed stocks, transport issues, proximity to power transmission and distribution systems (T&D), environmental justice, etc.
 - the elements, size and toxicity of emissions, (especially particulates) released per ton of feedstock consumed by such plants, per megawatt produced, and by the total amounts placed into the environment. All three measurements (and more) were requested.
 - emissions based on the different types of feed stocks, i.e. construction and demolition waste, green waste, etc.
 - the quality and distribution of the region's biomass and wind resources (e.g. effects of declining forest management, etc.)
 - viability of mobile units, smaller (neighborhood-sized) units

- how this technology and its emissions compare with CCGT and other older, more conventional power plants
- ❖ the basic processes, limitations and advantages of state of the art wind farms, including:
 - avian mortality and other environmental impacts of the new larger, slower wind turbines,
 - bottlenecks in the regional T&D system that could effect the cost and value of wind energy
 - best practices in wind farm siting, aesthetics and community involvement
- ❖ **Recommendation: Develop the image of biomass and wind as new, local, reliable, cost-effective, sexy, renewable technologies.** [“Biomass” as a term, is misunderstood and is a liability. A new term such as “organic energy,” “silva-gas,” etc. is needed.] Demonstrate how CT can be a leader in the manufacture and financing of wind and biomass power generation, as well as a leader in solicited, consensus-driven plant siting. As above, quantify the existing and near term fossil fuel-based externalities and risks for CT in comparison to renewable wind and biomass. Deliver that information to the environmental community and the public in compelling, interesting ways focused on direct experience and dialogue, rather than “lecture or “advertising.” Use best practices to develop a variety of creative outlets, formats and spokespeople and/or facilitators, so that people discover the facts and their interests for themselves under the auspices of a respected, neutral convener.
- ❖ **Recommendation: Rapidly develop a long-term, coordinated public outreach and listening campaign, building on the strengths of all the stakeholders, and especially non-profits that have substantial membership in CT and/or strong technical expertise.** Build a structured, far reaching, diversified campaign that includes developing a team comprised of technical expertise and activists specializing in biomass or wind issues and NIMBY politics that can *train to train others in facilitation that enhances self-discovery*. The team and its discussions should include people who know the electricity industry so as to ground discussion in the practical aspects (financial, market, legislative, and technical constraints).

The effort would be structured and timed to raise awareness and understanding at times of high public awareness, such as during gas/oil price spikes, brown outs, asthma rate spikes, communities where sprawl is ‘hot’ etc. Participants suggested that the effort could operate under a banner of “We are at an energy crossroads.” or even the more radical concept of “Deregulation is failing, now what?” [Prices are up, few new plants are being built even as demand rises, the situation is worse than expected...] Others asked, “Are we going to build what we built before, or what is possible and better?”

Under such a heading, this team would put together and be available to offer a “state of the art of renewable energy” road show. Consultation with marketing/PR and NIMBY experts would improve effectiveness. Pairs of team members would then be available to citizens, municipalities and groups across the state for briefings and to lead discussions on the issue, compare the old and new technologies, walk participants through social cost-benefit analysis of the different technologies, etc. They need to be able to go to others’ meetings, more than holding their own events. Preliminary input and research indicates that such a broad-based, sustained effort is completely unavoidable given the history of siting in the state and current public attitudes.

It was suggested CEF enlist and help fund a public television or public radio documentary on biomass energy... ‘A Promise for the Region’... that addresses and clarifies the issues, deals with misinformation, etc. “With the expected skyrocketing costs of natural gas (due to all the electric generation plants using gas) and oil, people will want to hear of some alternatives. Then the advertise the heck out of the program, especially to environmental newsletters in the state, town governments etc.” -CT Sierra Club
In addition to the areas listed above, the outreach and listening campaign would:

- 1) increase the likelihood that “pro” biomass and wind networks will include those with good connections to political leaders and decision makers at the highest levels

- 2) Build understanding of *--and long term engagement in--*the licensing and siting process, with environmental groups helping to draw planning commissions and other municipal officials to any trainings and dialogues
- 3) Use the hook of high energy prices to promote conservation/efficiency/renewables –to promote diversified supplies rather than regional reserves and useless railing against OPEC.
- 4) Demonstrate what the environmental community favours.
- 5) Offer 4 simple things anyone can do:
 - a. be efficient and reduce use of energy
 - b. buy green power
 - i. (Dialogue participants felt every member of a CT environmental group should be a CT Energy Co-op member/customer.)
 - c. support development of clean energy projects & the closing of dirty power plants
 - d. learn about wind and clean biomass to be an informed citizen with more options.

There are a lot of messages here –focus groups and effective listening are needed to test which messages resonate most effectively with the different target audiences.

- ❖ **Recommendation: Continue these high level dialogue meetings, but with a more diversified group of parties including key decision makers, legislators & others with political influence who could kill any proposed project. Also experiment with service clubs and other low risk audiences.** All dialogues need to link, for example, wood and related solid waste problems with sprawl, climate change, etc. Ideally the participants would first become engaged and familiar with each other through non-controversial interaction so that this forms a basis for finding common solutions when the going gets difficult. The political history for biomass in the state has to be squarely faced. The dialogues need to focus on the theme of this time as a unique opportunity to decide the course of CT's future energy supply. This dialogue could include a field trip to the McNeil biomass gasification project in Burlington, VT.

There is a strong shared vision among the project participants, and a willingness to both ask good strategic questions and contribute staff time and expertise based on each organization's strengths (See Appendix B)

Recommendation: Create a consensus document representing CT environmental groups and developers outlining “rules of engagement” and criteria for wind and biomass projects the former would support (perhaps building off Green-e and Power ScoreCard). For any proposed project, coordinate meetings, as often and early as possible between environmental groups, developers and other stakeholders such as that held by the Rivers Alliance on CCGT plants. Developers could then modify projects accordingly. Such meetings would focus on developing the best possible practical standards for siting and operations.

There is a strong need for environmental justice. The Connecticut environmentalists participating in these meetings asserted the societal, ecological, human health and economic benefits of new, cleaner, renewable power facilities should accrue first to those poor, minority communities that have generally born the burden --as demonstrated by extraordinarily high rates of respiratory problems-- of unwillingly playing ‘host’ to the older, “dirty” power plants, especially the “Filthy Five.” At the same time, there are questions as to whether these burdened communities can come to see newer cleaner biomass plants as offering positive options for re-powering the plants already in their communities. With wind, there is a sense that the wealthier, rural towns with ridge tops are the first places to engage, speaking from a political standpoint, as well as from a technical one. There is a strong desire among the dialogue participants to start a conversation in which these communities recognize and accept their relationship and inter-dependence with the urban cores.

- ❖ **Recommendation: Engage the (generally urban) burdened communities in meaningful dialogue to establish what is wanted there, and evaluate potential plant sitings on the basis of this input and the larger lens of environmental justice. Issues of equity need to be raised with highly placed decision makers well before a specific proposal is on the table.** This dialogue needs to be built on an open strategic questioning format. It needs to acknowledge that as political animals they have to deal with the lobbying of wealthy, powerful interests. Develop “sister cities” and discussion circle programs between rural and urban areas to address inequity and ease the way for biomass and wind. Ideally the Siting Council would issue a certificate of environmental and social compatibility.

Siting evaluations should not be made solely on the basis of technical suitability, environmental impact and political strong-arming or subterfuge. There is a desire that new biomass plants should be at least “50% cleaner” than the power plants they replace. Suburban communities should not be subsidized by urban populations with respect to electricity distribution costs.

Unexpected alliances are needed to get the issues properly heard, especially in legislative or public policy contexts. The unexpected can move people out of complacency and denial.

- ❖ **Recommendation: Seek unusual partners for the campaign.** These might include: insurers, economic development forces looking for growing technology areas, labor unions, the medical community (including HMO’s), faith communities, businesses in Climate Wise Partnership, BSR, developers and realtors opposed to sprawl, lawyers for social responsibility, planning commissions, youth community service, etc.

Any proposed new biomass plant must address the issues of human health, environmental health, property values, environmental justice, truck traffic (related to biomass feedstock transport), visual intrusion, etc. as well as economics or it will be strongly opposed. Even plants that fully address these issues may never get off the ground due to NIMBY syndrome. This is especially true if they are prospectively sited using the traditional processes in which a location is selected and “announced” by the state or developer based on technical and externally assessed political criteria.

- ❖ **Recommendation: Coordinate the recommended public outreach efforts with a policy of recruiting potential sites. Build expertise in getting beyond the NIMBY syndrome. Work to get communities competing to host renewable power plants based on their strong appeal as state of the art, clean catalysts for local economic development, self-reliance, opportunities in education, eco-industrial parks, eco-tourism, etc.** Build on the proven success of process-focused information outreach and recruiting efforts in the hazardous materials industry, for example. Once a site is competing to host a power plant, holistic community engagement must continue. In some exemplary eco-industrial sites and hazardous materials processing facility examples, even K-12 school children were involved in developing site design guidelines, schematic design, etc. so that the sites were aesthetically pleasing and rooted in the community.

IV. Sample Strategic Questions Raised by Participants

- ❖ How do we plug environmental justice issues into the increased momentum on renewables and clean energy? How can we connect urban and suburban stakeholders in non-threatening ways?

- ❖ How can we pre-plan for the loss of some subsidies, changes in federal policies, etc. so programs aren't gutted when someone like Reagan comes into office, as before?
- ❖ Things are changing so fast and in so many ways, how can we keep our focus?
- ❖ The Energy and Conservation Mgt Board is interested in creating "an energy ethic." What are the opportunities for joint funding?
- ❖ Could you get an exemption from paying the Competitive Transition Assessment [stranded assets charge] if you put a certain level of renewables on your business, house or other site?
- ❖ In what ways can the dialogue move renewables from a warm, fuzzy 'nice to have' to an economic, social and health 'gotta have,' particularly using market forces? I.e. what biomass and wind technologies, services and locations would enable us to benefit doubly by making clean energy while hiring/training the largest pools of unemployed members of the region's work force?

V. Evaluating The Dialogue Process:

The Dialogue meetings generally met their goals. Evaluations by all the participants indicate they found the meetings informative, engaging, and rich in content about the state of wind and biomass technologies and the related siting issues. Participants indicated they felt they were truly "heard" by CEF. Most participants indicated outreach efforts to which they could (and would like to) contribute in some form (see especially the July 10 meeting minutes) though clearly funding and staffing limitations are strongly felt.

The few shortcomings in the process involved:

- 1) lack of participation from some traditional opposition groups,
- 2) agendas that tended to be too ambitious and pushed the participants towards coming to conclusions and/or commitment to taking action. There was not enough time to explore the deeper technical and political aspects that began to surface. This was the result of the natural tension between CEF's need for specific recommendations from the participants on how to proceed (and with whom), and the participants' need to have far more technical information on the technology, environmental and health impacts, and specific power plant siting proposals in order to tell CEF what they wanted in terms of possible 'next steps.'
- 3) Dividing the biomass Dialogue into two groups in order to get smaller meetings with a higher quality of conversation. This was successful in improving input, but also led to scheduling difficulties and some participants' understandable (if mistaken) perception that the second biomass meeting (a teleconference) was of secondary importance.

Dialogue Lessons learned

- A) Keep meetings small, informal and frequent, 6-10 participants is ideal.
- B) Given the over-worked nature of the environmental audience (and many others these days) plan to go to the people whose input you value, don't ask them to come to you. This will typically mean the going to their meetings and being available to meet in people's homes, both before and after public hearings and other relevant events.

VI. Re-emphasizing the Key Point

If “megawatts of renewables” are needed, it is highly recommended the Clean Energy Fund focus on activities that strongly and directly address the publics’ and environmentalists’ common misperceptions. In recent decades in Connecticut, local stakeholders have typically reacted very negatively to any announcement that their town has been selected for any power plant, especially biomass plants. Local citizens and certain environmental groups have mobilized to do all they can to slow down and then stop these developments. More often than not, the information from which they developed their positions was out of date or incorrect. Emotions have run well ahead of reason. Given the highly charged nature of the situation, it is also strongly recommended CEF adopt a policy of recruiting sites for wind and biomass facilities, rather than using more traditional site selection processes. Given the political history, it is very important that early efforts are successful; the general view is that there will be few if any second chances.

It should be noted the overall dialogue process could be accelerated if the number of facilitators/educators is significantly increased so that a large number of interactions can be held in a shorter span or time. [However, the individual or organizational attitude change process itself often moves at its own pace.] The frequency, intensity and positive experience of being heard and getting technical questions answered during the interactions are far more important to participants than coming to any particular conclusion at any given time.

ⁱ See **Biomass Strategies for Connecticut**, by Joel Gordes of Environmental Energy Solutions

ⁱⁱ See Appendix A: Letter of Invitation and list of participants

ⁱⁱⁱ See Appendix B: Dialogue Transcripts